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Summary of
Cotton Fiber and Processing Test Results

CROP of 1982

USDA

U.S. DEPARTMENT OF AGRICULTURE
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CONTENTS

TABLES

SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS
CROP OF 1982

INTRODUCTION

This report contains information on the fiber properties and spin-
ning performance of cotton from major commercial production areas
of the United States. Similar reports have been published annually
since 1946.[1] These reports summarize and add supplemental informa-
tion to the data published in biweekly reports which were titled
"Cotton Fiber and Processing Test Results, Crop of 1982" and num-
bered 1 through 8.

The results of fiber and spinning tests made in connection with
these annual surveys provide data for studies of the relationships
between fiber properties, processing performance and product
quality. The data is used to measure the effectiveness of the
standards to be sure that they continue to reflect differences in
utility. The biweekly reports enable merchants and manufacturers
to use the results to locate sources of cotton to meet their spe-
cific requirements. Farmers and breeders may also use the data as
a source of quality information regarding the various varieties of
cottons produced under commercial growing conditions.

SAMPLING PROCEDURES

The procedure for selecting samples for the 1982 survey was designed
to provide test lots representing all major varieties in each of the
territories served by Cotton Division Marketing Services Offices
(MSO's). Variety selections were based on the predominant varieties
planted in each MSO territory as reported by the Cotton Division in
"Cotton Varieties Planted, 1982 Crop." A production area was selected
to represent the leading variety and one to represent each of the
other varieties with an expected production of 10,000 bales or more
in each MSO territory. Additional areas were selected for those
varieties with a production of over 200,000 bales. One additional
production area was selected for each 200,000 bales or portion
thereof in excess of the first 200,000 bales. Production areas with
at least 70 percent of one variety were designated as that variety
with no attempt made to maintain the purity of the variety except
by selection of representative production areas. However, in some
cases where there was an unusual interest in a particular variety
and a low percentage was planted in the area, the MSO selected lots
representing 100 percent of the variety. The locations of the 98
production areas selected for the 1982 survey are shown in Figure 1.

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[1]Copies of past summary reports may be obtained from the
   Testing Section, Cotton Division, AMS, USDA, P.O. Box 67,
   Clemson, SC 29631, until supplies are exhausted.

DISTRIBUTION OF PRODUCTION AREAS
FROM WHICH COTTON SAMPLES WERE TESTED, CROP OF 1982

AGRICULTURAL MARKETING SERVICE   U.S. DEPARTMENT OF AGRICULTURE
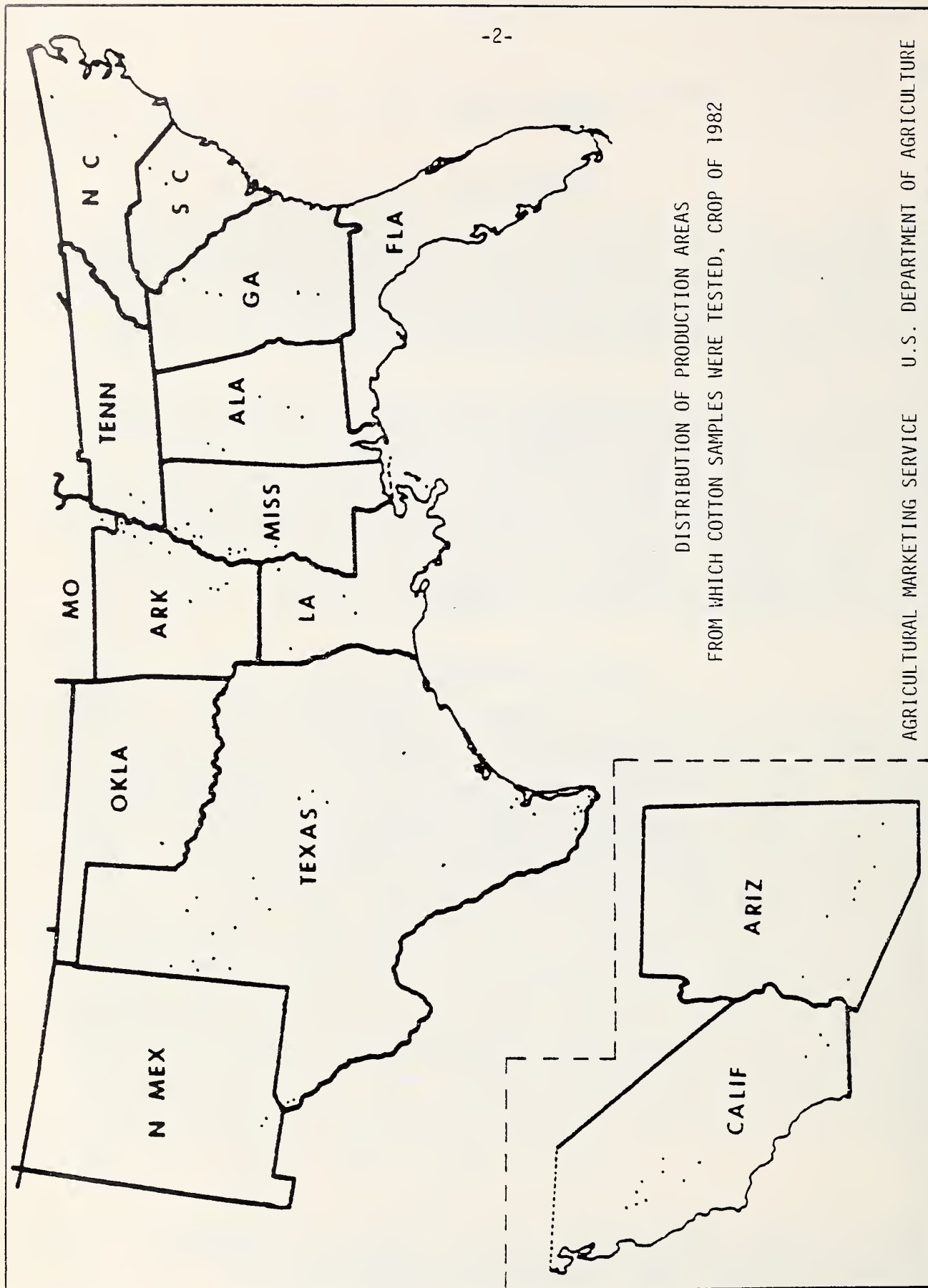
Figure 1.   Location of production areas selected for the 1982 survey.

Two test lots were collected from each production area during the harvest season. Lots were selected to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce the specified qualities in quantities large enough to enable buyers to obtain lots of even-running grade and staple. Obviously, other qualities of cotton are available in each area as a result of normal seasonal, soil, harvesting and other variations. Most production areas also produce cotton of varieties other than those included in these tests.

Each spinning lot used in this study was made up of 20 to 30 samples of the same grade and staple length from bales classed for growers under the Smith-Doxey Act. These even-running lots of samples were then tested at the Cotton Division's Fiber and Spinning Laboratory located in Clemson, South Carolina. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply during the collection period.

* * NOTE * *

DUE TO A LACK OF FUNDING, THIS SURVEY WAS DISCONTINUED
FOR APPROXIMATELY TWO MONTHS DURING THE HARVEST SEASON.
LOCAL MSO'S STOPPED COLLECTING SAMPLES DURING THIS TIME.
WHEN THE SURVEY RESUMED, SEVERAL MSO'S WERE UNABLE TO
COLLECT TWO SAMPLINGS IN THE NORMAL FASHION. THEREFORE,
THE DATA PRESENTED IN THIS SUMMARY FOR THE 1982 CROP MAY
NOT BE ENTIRELY REPRESENTATIVE OF A TYPICAL CROP.

* * * * * * *

LABORATORY PROCEDURES

Fiber and spinning tests were performed under standardized pro-
cedures at the Cotton Division's Fiber and Spinning Laboratory
in Clemson. Most of the fiber tests were performed in the
standard atmospheric conditions of 65 percent relative humidity
and temperature of 70 degrees F. Standard test procedures as out-
lined by the American Society for Testing and Materials (ASTM) were
used in making tests. Tests not covered by ASTM were performed
using commonly accepted procedures as recommended by the instrument
manufacturer. Five subsamples were taken at random from each spin-
ning lot to provide representative specimens for the fiber tests.

Yarn processing or spinning tests were performed by a technique
developed in the Cotton Division laboratories for processing small
lots of cotton on standard-type textile machines. The samples in
each lot were thoroughly composited by hand-mixing before being fed
to the first process picker. This hand-mixing is similar to the
machine-mixing normally obtained in cotton textile opening equip-
ment. Observations were made at each process to measure processing
behavior and the yarns produced were tested to measure product quality.

On the basis of average past performance, cottons were grouped according to the expected staple length for the specified variety. All cottons of the specified variety were spun in the same manner, regardless of difference in staple length. This was done so that direct comparisons of different lots of cotton within a specified variety could be made. These samples were carded at specified production rates and spun into numbers that reflect the manufacturing values of the varieties tested. In general, the rate of carding and yarn numbers from the 1982 crop are as follows:

Group 1 - Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths 31/32 inch and shorter.

Group 2 - Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarn with a twist multiplier of 4.00 plus a carded spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch through 1-3/32 inches in staple length.

Group 3 - Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches through 1-1/4 inches in staple length.

Group 4 - Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Pima and American upland extra long staple varieties which are usually 1-5/16 inches or longer in staple length.

* * NOTE * *

CHANGES IN TEST PROCEDURES

The following is a list of changes in both fiber and processing
test procedures, which became effective at the start of the
1982-83 season.

1. Motion Control HVI measurements of upper half
    mean length and mean/upper half mean uniformity
    index were substituted for the Digital Fibro-
    graph 2.5% span length and 50/2.5% uniformity
    ratio for all upland cottons.

2. Digital Fibrograph measurements of 2.5% span
    length and 50/2.5% unifority ratio were sub-
    stituted for array upper quartile length and
    coefficient of variation for extra long staple
    cottons.

3. Pressley zero gage strength measurements were
    dropped for extra long staple cottons.

4. Motion Control HVI 1/8-inch gage strength tests
    were substituted for Pressley zero gage strength
    for all upland cottons.

5. A sugar content test was added. This test was
    developed by Henry H. Perkins, Jr., Cotton
    Quality Research Station, Agricultural Research
    Service, USDA, Clemson, South Carolina; and is
    based on the reaction of alkaline potassium
    ferricyanide with the reducing substances on
    cotton.

6. All chemical finishing tests were dropped from
    the survey.

7. An average yarn strength break factor was added.

* * * * * * *

DISCUSSION OF TEST RESULTS

U.S. Average - Upland Cotton

There were 172 spinning lots of upland cotton tested in 1982-83 compared with 235 lots in 1981. Test results from the short, medium and long staple cottons were included in the U.S. Upland Average. Upper half mean length and length uniformity were slightly higher in 1982-83 than in the previous season. The mike readings averaged 0.1 lower than a year earlier. Fiber strength remained the same. Both Shirley Analyzer nonlint content and picker and card waste were lower when compared with the previous season. Strength of 22s yarn remained about the same in 1982-83 while yarn appearance grades were higher. The average number of neps per 1000 yards of yarn was much lower in 1982-83 than in the previous season. The average spinning potential yarn number for the 172 lots of 1982 crop cottons was slightly higher than the average from 1981.

Group 1 - Short Staple Cottons

A total of 25 short staple spinning lots was tested from the 1982 cotton crop compared to 58 lots from the 1981 crop. Fiber test results showed these 1982 crop cottons to be a little shorter but slightly more uniform when compared with test results from the previous crop. Fibers from these cottons were coarser with the same average fiber strength. Both nonlint content and processing waste measured lower compared to samples from the previous year. Yarns spun from these 25 spinning lots were a little stronger with slightly lower appearance grades. Short staple cottons from the 1982 crop produced about the same average spinning potential yarn number as a year earlier.

Group 2 - Medium Staple Cottons

All medium staple American upland spinning lots totaled 137 for the 1982 crop compared with 169 lots a year earlier. Test results from these lots showed the fibers to have about the same length, length uniformity and strength as in the previous year. Mike readings averaged 0.2 lower. Picker and card waste was lower. Yarn strength remained about the same while appearance grades averaged higher than in the preceding season. The number of neps in 22s yarn was much lower than a year earlier. Spinning potential yarn numbers for the medium staple 1982 crop cottons averaged 61, just one higher than the average from the 1981 crop.

States in the Southeastern production area include North Carolina, South Carolina, Georgia and Alabama. Twenty-two spinning lots were tested from the Southeastern area during the 1982-83 season compared with 24 from the 1981-82 season. Fiber length was longer while length uniformity remained the same. Micronaire readings averaged lower than a year earlier. Both HVI and laboratory 1/8-inch gage fiber strengths were lower. Shirley Analyzer nonlint content measured higher in the medium staple cottons from the Southeast. However, waste from both the picker and card averaged lower than in the previous season. Yarns spun from these 22 spinning lots were weaker with lower appearance grades. The average spinning potential yarn number was higher than one year earlier.

The South Central production area contains the states of Tennessee, Missouri, Arkansas, Louisiana and Mississippi. A total of 43 spinning lots was tested from the 1982 crop compared to 58 from the 1981 crop. Fiber tests showed the 1982 crop cottons to be a little longer than a year earlier. Length uniformity, mike and 1/8-inch gage fiber strength were about the same as in the preceding season. The average nonlint content from these spinning lots was unchanged from the previous year while processing waste was lower. Yarns spun from these medium staple cottons were weaker with higher appearance grades. The average spinning potential yarn number rose slightly over last season's average number.

Oklahoma and all but the far western counties of Texas served by the El Paso Marketing Services Office make up the Southwestern production area. Thirty-two medium staple lots were tested in the 1982-83 season compared to 48 from the 1981-82 season. Fiber tests showed these medium staple cottons to be shorter with about the same length uniformity, mike and strength as the year before. Both nonlint content and picker and card waste were lower than in the previous year. Skein strength of 22s carded yarn from the 1982 crop averaged three pounds lower than the year before. Yarn appearance grades averaged higher in the 1982-83 season while the average number of neps per 1000 yards of yarn averaged lower. Spinning potential yarn numbers were lower than in the previous season.

Arizona, California, New Mexico and far West Texas make up the Western production area. A total of 40 medium staple spinning lots was tested from the 1982-83 season compared to 39 in 1981-82. These cottons were a little longer than the year before with the same average length uniformity index. Micronaire readings from these medium staple cottons were slightly lower compared to the prior season. Fiber strength remained about the same as did nonlint content and processing waste. Yarns processed from these cottons had nearly the same skein strength as yarns from the previous crop. Appearance grades averaged higher. Spinning potential yarn numbers from these medium staple cottons were higher than comparable numbers from the 1981 crop.

Group 3 - Long Staple Cottons

The Clemson Laboratory tested ten spinning lots of long staple cottons from the 1982 crop compared to eight from the 1981 crop. These lots tested slightly longer with the same average length uniformity index as those tested from the 1981 season. Mike values were lower while average fiber strength remained the same as a year earlier. Both nonlint content and manufacturing waste were about the same as the year before. Yarn strength was a little higher while average yarn appearance grades were lower than in the previous season. The average spinning potential yarn number for these long staple cottons increased slightly.

The same number of long staple spinning lots, six, was tested from the Southeast in both 1981 and 1982. Fiber test results showed the 1982 crop cottons to have the same length and length uniformity as in the previous season. Micronaire readings averaged 0.5 lower than a year earlier. Both HVI and laboratory 1/8-inch gage strength tests indicated stronger fibers than the year before. Nonlint content was unchanged while picker and card waste was higher than in the previous year. Yarns produced from these cottons had the same strength but lower appearance grades. The number of neps per 1000 yards of yarn averaged slightly lower than in the preceding season.

Four spinning lots of 1982 crop long staple cottons were tested from the Western production area compared to only two the year before. Fiber tests on these four lots showed about the same fiber properties as their counterparts from the 1981 crop. The yarns produced from these four lots were a little weaker than a year earlier while the average spinning potential yarn number was slightly higher.

Group 4 - Extra Long Staple

Twelve American Pima extra long staple spinning lots were tested from the 1982-83 season, the same number as in the prior season. Fibrograph 2.5 percent span length was shorter than a year ago. The average mike was higher while 1/8-inch gage fiber strength remained the same. Shirley Analyzer nonlint content was higher in 1982-83 while picker and card waste was lower. Comber waste averaged slightly higher when compared to 1981 crop cottons. Combed yarns spun from these samples were slightly weaker while appearance grades were higher than a year ago.

DESCRIPTION OF TABLES

Most of the tables are in two parts located on separate pages.
The first page gives fiber measurements and the next gives yarn
measurements. Using Table 5 as an example, the first spinning
lot is from Aquilla, Texas. The fiber measurements are on page 30.
The yarn measurements for that same lot are on the following page.

TABLE 1

Shown in Table 1 (page 12) are averages for fiber and processing
test results from selected gin points for the 1981 and 1982 cotton
crops. These data are grouped by staple and area.

TABLE 2

Table 2 shows the fiber and carded yarn properties by area, staple
and state for the 1981 and 1982 crops. The "coarse" and "fine"
headings in this table refer to different size yarns according to
the staple group.

TABLE 3

Beginning on page 22, Table 3 shows 1982 crop data by staple, grade
and area. For statistical purposes, only grade and staple combina-
tions with three or more lots are reported.

TABLE 4

Table 4 gives fiber and yarn test results by variety from selected
gin points. As indicated in the section on sampling procedures,
the production areas selected must have at least 70 percent of one
particular variety in order to be selected. In many cases a pro-
duction area will be a 100 percent or "pure" variety gin. Test
data for the pure varieties are presented in Table 4 to provide as
meaningful information as possible for specific varieties.

TABLES 5 THROUGH 8

These tables show test results on individual spinning lots from
each production area. Results on short, medium, long and extra
long staple groups are given in Tables 5, 6, 7 and 8, respectively.
Spinning results on short staple cottons spun on an open-end spin-
ning frame are shown in Table 5a. Table 7a contains combed yarn
quality characteristics of cotton in the long staple group.

TABLE 9

Table 9 gives the means and standard deviations for all test results by staple group. Data not reported in this summary is indicated by either a blank space or a dash (-) in place of the data. For instance, on page 63 of Table 9 there is no combed yarn data under short or medium staple groups. This summary does not report combed yarn data for these staple groups.

TABLES 10 THROUGH 12

These tables show the results of simple correlation analyses for fiber and processing tests. An explanation of simple correlations is contained in the section on "Description of Statistics Used in Analysis," page 79. To look up a particular correlation, find one of the variables in question in the heading and then read down the left margin until the second variable is located. The simple correlation coefficient is given at the intersection (i.e., the column and row intersection).

TABLES 13 THROUGH 15

A complete explanation of the multiple regression technique is given in the section, "Description of Statistics Used in Analysis," page 79.

Regression equations for estimating spinning performance and yarn quality (dependent variables) from fiber test measurements (independent variables) are shown in Tables 13 - 15. For each dependent variable, five equations were developed. The dependent variables are expressed in terms of:

    (1) The best one-independent variable equation
    (2) The best two-independent variable equation
    (3) The best three-independent variable equation
    (4) The best four-independent variable equation
    (5) The best five-independent variable equation

For example, Table 14, page 73, the best two-independent variable equation for total picker and card waste is expressed:

    Total picker and card waste = +2.67
                                = + .81 (Shirley Analyzer
                                        nonlint content)
                                + .17 (color of raw stock,
                                       yellowness (+b))

The standard error of estimate and coefficient of determination (R^2) for this equation is .51 and .64, respectively. The R^2 indicates that 64 percent of the variation in total picker and card waste can be explained by Shirley Analyzer nonlint content and the +b measurement of the color of raw stock.

The best five-independent variable equation for total picker and card waste is expressed:

Total picker and card waste = +10.19 -.13 (HVI uniformity)
+.34 (micronaire)
+.04 (HVI 1/8" gage strength)
+.84 (Shirley Analyzer nonlint)
+.19 (color of raw stock (+b))

The standard error of estimate and R^2 for this equation are .50 and .66, respectively. These five-independent variables explain 66 percent of the variation in total picker and card waste. This example shows that adding uniformity, micronaire and HVI 1/8" gage strength to the regression equation explained only two percent more of the variation in total picker and card waste than nonlint content and color of raw stock (+b) in the two-independent variable equation.

An independent variable may be selected for one equation and then not selected for the next equation. This is a result of the regression technique used. The technique used attempts to maximize R^2 by selecting the best combination of independent variables. An independent variable is selected based on its contribution in explaining the variation in the dependent variable. A variable's contribution may be influenced by the introduction of other variables into the equation. For example, Table 13, page 71, with elongation 22s yarn as the dependent variable, color of raw stock (Rd) was selected as the independent variable which gave the best R-square (.16) for a one-variable equation. However, the equation on the next line shows the two-independent variables with the best R-square to be HVI and Stelometer 1/8-inch gage strength. In this case, color (Rd) was dropped from the two-variable equation. Color didn't enter into the equation again until the three-variable model and then dropped out on both the four and five-variable models.

TABLE 16

This table gives the standard machine settings and laboratory atmospheric conditions for each phase of yarn processing used in these tests. The data is grouped by staple lengths.

TABLE 1.--COTTON: AVERAGE RESULTS OF CLASSIFICATION, FIBER, AND PROCESSING TESTS FROM SELECTED GIN POINTS, CROPS OF 1981 AND 1982.

AREA AND CROP YEAR	NO. OF LOTS	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRO-NAIRE	FIBER STRENGTH HVI	FIBER STRENGTH STEL.	SHIRLEY ANALYZER NONLINT	SUGAR CONTENT	PICKER & CARD WASTE	SKEIN STRENGTH 22s	YARN APPEARANCE 22s	YARN NEPS 22s	SPY NO.
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	LBS.	INDEX	NO.	NO.
SHORT STAPLE - AMERICAN UPLAND															
1981	58	84	31.4	0.97	79	37	23	22	4.7	-	8.1	95	104	36	50
1982	25	92	31.0	0.96	80	39	23	22	3.5	0.50	6.4	98	100	28	51
MEDIUM STAPLE - AMERICAN UPLAND															
SOUTHEAST															
1981	24	92	34.3	1.09	81	49	25	23	2.8	-	7.0	105	105	68	57
1982	22	91	35.2	1.11	81	44	24	22	3.1	0.19	6.3	102	103	27	60
SOUTH CENTRAL															
1981	58	91	34.9	1.10	81	46	25	23	3.2	-	7.5	106	96	83	59
1982	43	90	35.6	1.12	81	45	25	23	3.2	0.21	6.8	103	102	29	60
SOUTHWEST															
1981	48	86	33.8	1.06	81	40	24	23	4.0	-	8.1	105	86	76	62
1982	32	91	32.8	1.01	81	41	25	23	3.3	0.55	6.8	102	108	20	54
WEST															
1981	39	97	35.2	1.10	81	44	26	25	2.6	-	6.5	113	97	76	62
1982	40	96	35.6	1.12	81	43	27	25	2.6	0.30	6.3	114	102	34	67
U. S. AVERAGE MEDIUM STAPLE															
1981	169	91	34.6	1.09	81	45	25	23	3.2	-	7.4	107	95	77	60
1982	137	92	34.9	1.09	81	43	25	24	3.0	0.31	6.6	106	104	28	61

TABLE 1.--CONTINUED

AREA AND CROP YEAR	NO. OF LOTS	CLASSIFICATION GRADE INDEX	CLASSIFICATION STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	FIBER LENGTH M/UHM UNIF. PCT.	MICRONAIRE RDG.	FIBER STRENGTH HVI G/TEX	FIBER STRENGTH STEL. G/TEX	SHIRLEY ANALYZER NONLINT PCT.	SUGAR CONTENT PCT.	PICKER & CARD WASTE PCT.	SKEIN STRENGTH 22s LBS.	YARN APPEARANCE 22s INDEX	YARN NEPS 22s NO.	SPY NO.
LONG STAPLE - AMERICAN UPLAND															
SOUTHEAST															
1981	6	93	35.3	1.14	81	46	25	23	3.2	-	7.7	104	112	28	63
1982	6	90	35.5	1.14	81	41	26	24	3.2	0.18	8.0	104	97	24	62
WEST															
1981	2	96	37.5	1.16	82	38	28	26	2.6	-	7.5	132	95	19	80
1982	4	97	37.0	1.16	82	37	27	26	3.0	0.40	6.8	128	98	26	82
U.S. AVERAGE LONG STAPLE															
1981	8	94	35.9	1.14	81	44	26	24	3.0	-	7.6	111	108	26	68
1982	10	93	36.1	1.15	81	39	26	24	3.1	0.27	7.6	113	97	25	70
U.S. UPLAND AVERAGE															
1981	235	89	33.8	1.06	80	43	25	23	3.6	-	7.5	104	97	65	58
1982	172	92	34.4	1.07	81	42	25	23	3.1	0.34	6.6	105	103	28	60

EXTRA LONG STAPLE - AMERICAN PIMA

(FIBROGRAPH: 2.5% SPAN, 50/2.5 UNIF; 50s COMBED YARN DATA; COMBER WASTE (PCT.))

AREA AND CROP YEAR	NO. OF LOTS	CLASSIFICATION GRADE INDEX	CLASSIFICATION STAPLE 32ND IN.	FIBROGRAPH 2.5% SPAN	FIBROGRAPH 50/2.5 UNIF	MICRONAIRE RDG.	FIBER STRENGTH HVI G/TEX	FIBER STRENGTH STEL. G/TEX	SHIRLEY ANALYZER NONLINT PCT.	SUGAR CONTENT PCT.	PICKER & CARD WASTE PCT.	SKEIN STRENGTH 22s LBS.	YARN APPEARANCE 22s INDEX	YARN NEPS 22s NO.	COMBER WASTE (PCT.)
1981	12	3	46.0	1.36	46	37	-	34	2.5	-	7.2	68	114	9	15.0
1982	12	4	46.0	1.33	45	39	-	34	2.7	0.23	6.8	66	124	47	15.2

TABLE 2.--COTTON: AVERAGE RESULTS OF CLASSIFICATION, FIBER TESTS, AND CARDED YARN PROCESSING TESTS BY AREA, STAPLE AND STATE FOR AMERICAN UPLAND SAMPLES FROM SELECTED GIN POINTS, CROPS OF 1981 AND 1982.

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK			SUGAR CONTENT
		GRADE INDEX	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
	NO.	NO.												
SOUTHEAST														
MEDIUM STAPLE														
ALABAMA														
1981	12	93	33.9	1.08	82	52	25	23	6.2	2.5	75.3	8.8	31-4	-
1982	10	91	35.1	1.11	81	43	25	22	6.2	2.9	72.9	8.4	41-3	0.19
GEORGIA														
1981	8	90	35.1	1.11	81	45	25	23	6.2	3.3	73.5	8.9	41-3	-
1982	8	90	35.4	1.12	81	44	24	23	5.8	3.3	72.9	8.4	41-3	0.21
NORTH CAROLINA														
1981	2	90	32.5	1.03	81	52	25	24	6.0	2.8	75.1	8.8	31-4	-
1982	2	92	34.5	1.05	81	44	24	24	5.7	2.6	72.3	8.7	41-3	0.21
SOUTH CAROLINA														
1981	2	94	35.5	1.12	81	47	26	24	6.3	3.0	77.9	8.5	31-1	-
1982	2	94	35.5	1.10	81	44	23	22	6.2	3.2	73.7	8.5	41-3	0.16
LONG STAPLE														
GEORGIA														
1981	2	92	35.0	1.14	81	47	25	23	5.9	3.7	75.7	9.3	31-3	-
1982	2	89	36.0	1.18	81	45	27	25	5.9	3.4	69.3	9.2	42-2	0.15
NORTH CAROLINA														
1981	2	94	35.5	1.16	81	45	26	23	6.2	2.9	76.3	8.6	31-3	-
1982	2	92	35.5	1.13	81	40	25	23	5.7	2.7	72.9	8.8	41-3	0.19
SOUTH CAROLINA														
1981	2	94	35.5	1.13	81	45	25	24	6.7	3.0	75.9	8.9	31-3	-
1982	2	90	35.0	1.12	80	39	25	24	5.8	3.4	75.8	8.5	31-4	0.21

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES										
			STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
			COARSE	FINE	BR. FACTOR	COARSE	FINE	COARSE	FINE	COARSE	FINE	
	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
SOUTHEAST												
MEDIUM STAPLE												
ALABAMA 1981	12	6.8	104	34	1998	5.9	4.6	109	77	65	214	53
1982	10	6.0	102	35	1999	6.7	5.1	103	79	25	167	62
GEORGIA 1981	8	7.1	106	35	2045	6.1	4.6	106	74	63	169	63
1982	8	6.7	102	36	2015	6.7	4.8	103	78	30	99	60
NORTH CAROLINA 1981	2	7.5	100	32	1900	5.5	4.5	105	75	68	200	45
1982	2	5.9	107	37	2084	6.4	5.1	105	85	19	75	58
SOUTH CAROLINA 1981	2	6.8	110	40	2198	6.6	5.4	80	60	103	345	70
1982	2	6.4	97	34	1905	6.7	5.0	100	75	34	179	55
LONG STAPLE												
GEORGIA 1981	2	7.9	100	33	1913	5.6	4.1	125	90	18	112	59
1982	2	7.7	112	41	2252	6.5	5.1	110	75	16	62	73
NORTH CAROLINA 1981	2	7.1	111	39	2191	6.3	5.1	110	80	26	167	71
1982	2	8.1	100	33	1925	6.4	4.9	95	65	26	360	59
SOUTH CAROLINA 1981	2	8.1	101	33	1931	6.6	5.6	100	70	41	227	61
1982	2	8.3	99	34	1927	6.1	4.5	85	65	29	122	55

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK			SUGAR CONTENT
		GRADE INDEX	STAPLE	HVI UHM	M/UHM UNIF.		HVI	STEL.			Rd	+b	COLOR CODE	
	NO.	NO.	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SOUTH CENTRAL														
MEDIUM STAPLE														
ARKANSAS														
1981	16	93	35.7	1.13	81	45	25	23	6.1	3.0	76.2	8.2	31-2	-
1982	16	91	35.7	1.13	81	46	25	23	6.2	2.9	73.8	8.6	41-3	0.20
LOUISIANA														
1981	10	88	34.6	1.10	81	46	26	24	5.4	3.4	74.1	8.5	41-3	-
1982	8	91	35.3	1.10	81	44	24	23	6.0	3.3	73.5	8.3	41-3	0.16
MISSISSIPPI														
1981	18	90	34.3	1.07	81	50	25	23	5.6	3.2	73.9	8.8	41-3	-
1982	13	88	35.8	1.13	81	43	25	23	5.7	3.8	72.7	8.5	41-3	0.21
MISSOURI														
1981	4	94	35.5	1.11	81	45	26	24	6.2	3.0	75.8	8.3	31-2	-
1982	2	94	35.0	1.09	82	53	26	23	5.6	3.0	75.7	8.4	31-3	0.23
TENNESSEE														
1981	10	93	34.8	1.08	81	44	24	23	6.4	3.0	76.9	8.3	31-2	-
1982	4	92	35.0	1.08	80	46	25	23	6.5	2.8	75.0	8.8	31-4	0.26

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES									
			STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
			COARSE: LBS.	FINE: LBS.	BR. FACTOR: AVG. NO.	COARSE: PCT.	FINE: PCT.	COARSE: INDEX	FINE: INDEX	COARSE: NO.	FINE: NO.	NO.
	NO.	PCT.										
SOUTH CENTRAL												
MEDIUM STAPLE												
ARKANSAS 1981	16	7.2	107	37	2098	6.3	4.9	93	68	83	343	62
1982	16	6.5	104	36	2045	6.4	5.0	104	78	23	180	62
LOUISIANA 1981	10	7.6	109	37	2127	5.9	4.8	92	69	107	347	61
1982	8	6.6	103	35	2005	6.3	4.7	100	73	38	153	60
MISSISSIPPI 1981	18	8.0	101	33	1946	5.6	4.3	100	71	72	287	51
1982	13	7.4	102	35	2007	6.4	4.8	102	76	30	157	61
MISSOURI 1981	4	7.2	110	39	2173	6.5	5.3	103	70	85	234	67
1982	2	6.8	100	31	1875	5.9	4.3	100	75	42	204	52
TENNESSEE 1981	10	6.8	108	36	2094	6.5	5.0	93	66	79	263	60
1982	4	6.3	98	34	1923	6.5	4.7	100	73	24	125	53

TABLE 2.--CONTINUED

-18-

AREA, STATE AND CROP YEAR	NO. OF LOTS NO.	CLASSIFICATION GRADE INDEX	CLASSIFICATION STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	FIBER LENGTH M/UHM UNIF. PCT.	MICRONAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	1/8" GAGE STRENGTH STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	SHIRLEY ANALYZER NONLINT PCT.	COLOR OF RAW STOCK Rd PCT.	COLOR OF RAW STOCK +b UNITS	COLOR OF RAW STOCK COLOR CODE NO.	SUGAR CONTENT PCT.
SOUTHWEST														
SHORT STAPLE														
CENTRAL TEXAS														
1981	14	87	31.4	0.97	79	40	23	21	5.8	3.9	73.4	9.5	32-2	-
1982	5	93	31.0	0.98	81	41	23	23	6.3	3.8	76.6	9.9	21-4	0.49
NORTHWEST TEXAS														
1981	38	84	31.4	0.96	79	37	23	22	7.1	4.8	73.0	9.4	32-2	-
1982	18	93	31.0	0.95	80	38	23	22	6.4	3.4	76.8	10.1	21-3	0.50
OKLAHOMA														
1981	6	80	31.5	0.99	79	36	24	22	7.2	5.4	69.7	9.4	42-2	-
1982	2	89	31.5	0.99	81	41	23	23	6.3	3.5	75.0	10.3	22-2	0.45
MEDIUM STAPLE														
SOUTH TEXAS														
1981	32	87	34.2	1.09	82	42	24	23	5.8	3.9	74.2	8.9	31-4	-
1982	16	93	33.2	1.02	82	42	25	23	5.6	2.7	76.7	8.8	31-3	0.59
CENTRAL TEXAS														
1981	4	89	34.5	1.08	81	45	24	23	6.6	3.3	73.8	11.1	23-2	-
1982	4	93	33.8	1.09	82	44	24	23	6.2	3.2	77.6	8.3	31-1	0.52
NORTHWEST TEXAS														
1981	12	82	32.6	1.00	78	32	24	22	7.2	4.7	74.1	9.6	32-1	-
1982	12	88	31.9	0.97	80	38	25	23	6.5	4.0	75.3	10.3	22-2	0.52

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES									
			STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
			COARSE	FINE	BR. FACTOR	COARSE	FINE	COARSE	FINE	COARSE	FINE	
	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
SOUTHWEST												
SHORT STAPLE												
CENTRAL TEXAS												
1981	14	7.6	289	94	2194	7.1	6.3	115	111	5	26	47
1982	5	6.5	323	100	2395	7.4	6.8	114	108	5	18	53
NORTHWEST TEXAS												
1981	38	8.1	293	94	2213	7.9	7.0	107	103	12	37	51
1982	18	6.3	312	98	2326	8.0	7.4	102	97	4	33	50
OKLAHOMA												
1981	6	9.0	300	96	2259	7.8	6.9	97	92	14	48	54
1982	2	6.7	312	97	2310	8.4	7.5	110	105	2	15	50
MEDIUM STAPLE												
SOUTH TEXAS												
1981	32	8.1	109	38	2135	6.3	4.9	82	65	89	317	66
1982	16	6.3	103	35	2010	6.1	4.7	114	88	17	74	56
CENTRAL TEXAS												
1981	4	7.6	105	36	2058	6.4	5.0	88	63	95	334	61
1982	4	6.2	105	35	2033	6.2	4.6	110	88	31	128	61
NORTHWEST TEXAS												
1981	12	8.2	94	30	1794	6.6	5.0	98	64	33	147	51
1982	12	7.8	100	33	1922	6.8	5.2	98	70	19	78	50

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION GRADE INDEX	CLASSIFICATION STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	FIBER LENGTH M/UHM UNIF. PCT.	MICRO-NAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	1/8" GAGE STRENGTH STEL. G/TEX	STEL. 1/8" ELON-GATION PCT.	SHIRLEY ANALYZER NONLINT PCT.	COLOR OF RAW STOCK Rd PCT.	COLOR OF RAW STOCK +b UNITS	COLOR OF RAW STOCK COLOR CODE NO.	SUGAR CONTENT PCT.
NO.	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
WEST														
MEDIUM STAPLE														
ARIZONA														
1981	15	97	34.5	1.09	80	47	24	23	6.0	2.6	79.0	8.2	31-1	-
1982	16	95	35.3	1.11	80	43	25	24	6.1	2.8	78.1	8.5	31-1	0.31
CALIFORNIA														
1981	22	97	35.6	1.10	81	43	28	26	5.8	2.6	78.7	8.4	31-1	-
1982	24	96	35.8	1.12	81	43	28	26	5.7	2.4	77.6	8.6	31-1	0.29
LONG STAPLE														
CALIFORNIA														
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	2	100	37.0	1.14	82	35	28	26	6.1	1.8	80.0	9.5	11-4	0.30
NEW MEXICO														
1981	2	96	37.5	1.16	82	38	28	26	6.3	2.6	78.6	8.8	21-2	-
1982	2	94	37.0	1.17	82	39	26	26	6.5	4.3	77.5	8.4	31-1	0.52

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES									
			STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
			COARSE	FINE	:BR. FACTOR	COARSE	FINE	COARSE	FINE	COARSE	FINE	
	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
WEST												
MEDIUM STAPLE												
ARIZONA 1981	15	6.9	98	32	1877	5.7	4.4	101	70	40	179	48
1982	16	6.6	102	34	1965	6.4	4.7	103	72	31	137	57
CALIFORNIA 1981	22	6.3	123	44	2453	6.0	4.7	95	72	104	255	71
1982	24	6.1	122	44	2429	6.4	5.0	103	75	36	126	74
LONG STAPLE												
CALIFORNIA 1981	-	-	-	-	-	-	-	-	-	-	-	-
1982	2	6.6	126	47	2556	6.6	5.2	105	75	18	86	72
NEW MEXICO 1981	2	7.5	133	48	2645	6.3	5.1	95	70	19	120	80
1982	2	7.2	130	47	2587	6.9	5.4	90	65	35	160	92

TABLE 3.--COTTON: AVERAGE RESULTS OF FIBER AND CARDED YARN PROCESSING TESTS BY STAPLE GROUP, AREA, GRADE AND STAPLE FOR AMERICAN UPLAND SAMPLES FROM SELECTED GIN POINTS, CROP OF 1982.

| STAPLE GROUP, AREA, GRADE AND STAPLE | | | NO. OF LOTS | FIBER LENGTH | | MICRO-NAIRE | 1/8" GAGE STRENGTH | | STEL. 1/8" ELON-GATION | SHIRLEY ANALYZER NONLINT | COLOR OF RAW STOCK | | | SUGAR CONTENT |
NAME	CODE	32ND IN.	NO.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI STEL. G/TEX	G/TEX STEL.	PCT.	PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
SHORT STAPLE														
SOUTHWEST														
M LT SP	32	31	8	0.96	80	40	23	22	6.3	3.0	77.3	10.1	21-3	0.47
SLM LT SP	42	30	3	0.91	79	37	22	21	6.4	3.6	76.2	10.2	22-2	0.51
		31	5	0.96	80	39	23	22	6.5	3.7	75.8	10.1	22-2	0.53
		32	4	0.99	81	40	25	24	6.1	4.0	75.0	9.7	31-3	0.47
MEDIUM STAPLE														
SOUTHEAST														
SLM	41	35	6	1.08	81	43	24	22	6.1	2.6	73.5	8.3	41-3	0.19
		36	4	1.13	81	43	25	23	6.4	2.7	75.1	8.3	31-4	0.22
LM	51	35	3	1.12	82	43	24	22	6.1	4.0	71.3	8.4	41-4	0.17
SOUTH CENTRAL														
SLM	41	35	9	1.09	81	47	24	23	6.0	2.7	74.7	8.5	31-4	0.20
		36	10	1.14	81	46	25	23	6.1	2.8	74.3	8.4	41-3	0.20
SLM LT SP	42	35	3	1.09	80	44	26	23	6.5	2.9	75.0	8.8	31-4	0.23
		36	7	1.13	81	45	26	24	6.6	3.4	73.0	9.1	41-3	0.22
LM PLUS	50	36	3	1.12	81	45	25	23	5.5	3.4	74.5	8.3	41-3	0.24
LM	51	36	5	1.13	81	41	25	24	5.7	3.7	72.2	8.1	41-4	0.19

TABLE 3.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	PICKER & CARD WASTE	STRENGTH			YARN PROPERTIES							
								ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
					COARSE	FINE	BR. FACTOR	COARSE	FINE	COARSE	FINE	COARSE	FINE	
NAME	CODE	32ND IN.	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.

SHORT STAPLE
SOUTHWEST

NAME	CODE	32ND IN.	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
M LT SP	32	31	8	6.0	318	98	2356	7.7	7.1	109	101	6	19	53
SLM LT SP	42	30	3	6.6	295	91	2182	7.7	7.1	103	97	3	21	33
		31	5	7.1	321	100	2380	8.0	7.4	104	98	4	19	51
		32	4	6.5	325	104	2440	8.3	7.5	100	100	3	54	60

MEDIUM STAPLE
SOUTHEAST

NAME	CODE	32ND IN.	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
SLM	41	35	6	5.7	100	34	1949	6.6	5.0	107	78	26	126	58
		36	4	6.2	105	36	2058	6.9	5.2	105	80	17	157	65
LM	51	35	3	6.8	102	35	1985	6.7	5.1	97	77	25	165	61

SOUTH CENTRAL

NAME	CODE	32ND IN.	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
SLM	41	35	9	6.3	100	33	1929	6.2	4.6	103	73	34	148	57
		36	10	6.4	103	36	2018	6.2	5.0	105	78	20	190	62
SLM LT SP	42	35	3	6.4	99	36	1981	6.5	4.7	100	77	22	136	52
		36	7	7.1	105	37	2069	6.7	5.0	100	76	35	164	65
IM PLUS	50	36	3	6.6	103	35	1996	6.3	4.7	97	77	36	124	59
LM	51	36	5	7.3	105	36	2069	6.3	4.9	104	76	28	162	63

TABLE 3.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	FIBER LENGTH				MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK			SUGAR CONTENT
				HVI UHM		M/UHM UNIF.			HVI : STEL.				Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	NO.	IN.		PCT.		RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
MEDIUM STAPLE																
SOUTHWEST																
SLM	41	32	4	0.99		81		39	25	23	6.0	2.9	77.9	8.5	31-1	0.58
		34	8	1.05		82		45	25	23	5.4	2.9	77.4	8.8	31-3	0.56
SLM LT SP	42	32	4	0.98		81		37	25	23	6.4	4.3	75.8	10.4	22-1	0.55
		33	4	1.04		81		40	25	23	6.0	3.2	75.6	9.4	31-3	0.48
		34	3	1.05		82		45	25	24	6.0	2.5	74.6	8.7	31-4	0.56
WEST																
M	31	35	5	1.09		80		47	26	24	6.1	2.0	79.6	8.8	21-1	0.33
		36	6	1.12		82		43	30	27	5.7	2.0	78.5	9.1	21-4	0.34
SLM	41	35	10	1.10		80		42	25	23	5.8	2.6	77.5	8.2	31-1	0.24
		36	14	1.13		81		43	27	26	5.8	2.8	77.3	8.4	31-1	0.29

TABLE 3.--CONTINUED

NAME	CODE	32ND IN.	NO. OF LOTS (NO.)	PICKER & CARD WASTE (PCT.)	STRENGTH COARSE (LBS.)	STRENGTH FINE (LBS.)	STRENGTH BR. FACTOR (AVG. NO.)	ELONGATION COARSE (PCT.)	ELONGATION FINE (PCT.)	APPEARANCE COARSE (INDEX)	APPEARANCE FINE (INDEX)	NEPS COARSE (NO.)	NEPS FINE (NO.)	SPINNING POTENTIAL (NO.)
MEDIUM STAPLE														
SOUTHWEST														
SLM	41	32	4	6.5	99	34	1927	6.1	4.6	110	80	17	70	49
		34	8	6.1	105	35	2035	5.9	4.5	113	89	23	98	57
SLM LT SP	42	32	4	8.0	100	34	1947	7.1	5.3	100	75	14	51	54
		33	4	6.8	106	35	2041	6.3	4.7	105	78	27	91	56
		34	3	6.2	104	36	2049	6.3	5.0	120	93	21	92	60
WEST														
M	31	35	5	6.2	99	33	1916	6.2	4.5	102	72	40	180	54
		36	6	6.0	131	48	2633	6.4	5.1	98	70	46	163	81
SLM	41	35	10	6.4	102	34	1961	6.2	4.6	100	74	27	123	58
		36	14	6.3	119	43	2384	6.5	4.9	104	74	32	118	72

TABLE 4.--COTTON: AVERAGE OF CLASSIFICATION, FIBER TESTS, AND YARN PROCESSING TESTS BY STAPLE GROUP, VARIETY AND STATE FOR SAMPLES FROM SELECTED 100 PERCENT ONE-VARIETY GIN POINTS, CROP OF 1982.

STAPLE GROUP, VARIETY, AND STATE	NO. OF LOTS	CLASSIFICATION GRADE INDEX	CLASSIFICATION STAPLE 32ND IN.	FIBER LENGTH HVI:UHM IN.	FIBER LENGTH M/UHM UNIF. PCT.	MICRO-NAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	1/8" GAGE STRENGTH STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	SHIRLEY ANALYZER NONLINT PCT.	COLOR OF RAW STOCK Rd PCT.	COLOR OF RAW STOCK +b UNITS	COLOR OF RAW STOCK COLOR CODE NO.	SUGAR CONTENT PCT.
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SHORT STAPLE														
GP 3774 CENTRAL TEXAS	1	85	31.0	1.01	79	35	22	23	5.7	4.6	78.2	9.4	21-3	0.43
MEDIUM STAPLE														
ACALA SJ-2 CALIFORNIA	6	97	36.2	1.12	82	44	29	27	5.8	2.2	77.0	8.8	31-3	0.32
ACALA SJ-5 CALIFORNIA	4	96	36.0	1.12	82	42	30	28	5.7	2.4	77.6	8.4	31-1	0.29
DELTAPINE 120 ARIZONA	2	97	35.0	1.06	82	49	27	25	6.6	2.3	76.6	8.7	31-3	0.20
DELTAPINE 41 ALABAMA	2	94	34.5	1.10	80	40	25	23	6.5	2.4	73.5	9.1	31-4	0.21
ARIZONA	2	90	35.0	1.13	81	41	27	24	6.1	3.9	76.0	8.5	31-4	0.39
ARKANSAS	2	87	36.0	1.13	81	38	24	24	6.9	3.7	73.1	9.5	32-2	0.33
MISSISSIPPI	1	85	36.0	1.12	80	41	25	25	5.5	4.2	73.0	8.7	41-3	0.29
DELTAPINE 55 MISSISSIPPI	1	89	36.0	1.14	81	41	26	23	5.8	4.5	73.5	9.4	31-4	0.18
DELTAPINE 61 ALABAMA	2	94	36.0	1.13	82	42	26	24	6.9	2.5	74.9	8.4	41-3	0.23
CALIFORNIA	4	96	35.0	1.09	80	43	25	24	5.6	2.4	77.9	8.4	31-1	0.23

TABLE 4.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE		NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES										
				STRENGTH		BR. FACTOR	ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
				COARSE:	FINE		COARSE:	FINE	COARSE:	FINE	COARSE:	FINE	
NAME	CODE 32ND IN.	NO.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
SHORT STAPLE													
GP 3774 CENTRAL TEXAS		1	6.8	309	101	2347	7.6	7.0	120	100	0	32	58
MEDIUM STAPLE													
ACALA SJ-2 CALIFORNIA		6	5.9	127	46	2553	6.5	5.1	110	80	34	117	79
ACALA SJ-5 CALIFORNIA		4	6.2	135	50	2736	6.6	5.0	100	75	43	153	81
DELTAPINE 120 ARIZONA		2	6.3	110	38	2148	6.6	4.9	110	80	17	51	59
DELTAPINE 41													
ALABAMA		2	5.6	103	35	2003	6.9	5.1	110	80	28	117	62
ARIZONA		2	7.1	110	37	2130	6.4	4.7	100	75	38	192	61
ARKANSAS		2	7.0	113	41	2263	7.3	5.1	100	80	21	124	73
MISSISSIPPI		1	7.3	109	39	2174	6.4	5.0	100	70	46	296	65
DELTAPINE 55 MISSISSIPPI		1	7.3	98	36	1978	6.5	5.0	100	70	28	214	61
DELTAPINE 61													
ALABAMA		2	5.9	109	37	2119	7.2	5.4	105	80	10	164	69
CALIFORNIA		4	6.3	102	34	1969	6.0	4.6	100	75	28	170	59

TABLE 4.--CONTINUED

-28-

STAPLE GROUP, VARIETY, AND STATE	NO. OF LOTS NO.	CLASSIFICATION GRADE INDEX	STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	M/UHM UNIF. PCT.	MICRO-NAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	STEL. G/TEX	STEL. 1/8" ELON-GATION PCT.	SHIRLEY ANALYZER NONLINT PCT.	COLOR OF RAW STOCK Rd PCT.	+b UNITS	COLOR CODE NO.	SUGAR CONTENT PCT.
MEDIUM STAPLE														
DES 422 MISSISSIPPI	1	90	36.0	1.12	81	44	24	22	5.6	4.0	74.5	8.4	41-3	0.32
DES 56 MISSISSIPPI	1	94	36.0	1.13	80	44	25	23	6.3	3.8	73.5	8.4	41-3	0.18
MCNAIR 220 SOUTH TEXAS	2	96	34.0	1.00	82	39	26	24	4.9	2.7	76.8	9.9	21-4	0.58
PAYMASTER 404 NORTHWEST TEXAS	2	89	31.0	0.95	80	40	26	24	6.7	4.1	74.8	9.6	31-3	0.51
STONEVILLE 213 MISSISSIPPI	1	94	36.0	1.12	81	46	24	23	6.2	2.6	76.2	9.1	31-3	0.39
TENNESSEE	2	92	35.0	1.08	81	47	26	23	6.9	2.9	74.4	9.2	31-4	0.28
STONEVILLE 506 MISSISSIPPI	1	85	36.0	1.13	80	40	25	24	5.8	3.1	71.8	7.9	41-4	0.14
STONEVILLE 825														
ALABAMA	2	88	35.0	1.13	81	43	24	22	6.1	3.8	71.2	8.0	41-4	0.19
ARKANSAS	3	92	35.3	1.12	81	46	25	23	5.8	2.6	73.6	8.5	41-3	0.19
GEORGIA	2	89	35.0	1.08	81	49	21	21	5.6	3.2	71.8	9.0	41-3	0.16
LOUISIANA	2	88	35.5	1.11	82	43	24	22	5.5	4.1	72.2	7.9	41-4	0.16
MISSISSIPPI	2	88	36.0	1.13	81	45	25	23	5.2	3.1	73.5	7.9	41-1	0.20
VAIL 7 ARKANSAS	1	89	34.0	1.11	81	46	25	23	6.0	2.8	74.0	8.3	41-3	0.22
LONG STAPLE														
ACALA SJ-2 CALIFORNIA	2	100	37.0	1.14	82	35	28	26	6.1	1.8	80.0	9.5	11-4	0.30
COKER 310 GEORGIA	2	89	36.0	1.18	81	45	27	25	5.9	3.4	69.3	9.2	42-2	0.15

TABLE 4.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE		NO. OF LOTS	PICKER & CARD WASTE	YARN PROPERTIES									SPINNING POTENTIAL
				STRENGTH :BR. FACTOR			ELONGATION		APPEARANCE		NEPS		
				COARSE	FINE	AVG.	COARSE	FINE	COARSE	FINE	COARSE	FINE	
NAME	CODE 32ND IN.	NO.	PCT.	LBS.	LBS.	NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
MEDIUM STAPLE													
DLS 422 MISSISSIPPI		1	7.2	106	36	2066	6.5	5.0	100	80	22	88	60
DES 56 MISSISSIPPI		1	6.9	98	32	1878	6.4	5.0	100	70	24	190	56
MCNAIR 220 SOUTH TEXAS		2	6.1	110	39	2167	5.9	4.8	110	90	16	71	60
PAYMASTER 404 NORTHWEST TEXAS		2	8.5	102	32	1917	6.6	4.9	100	70	21	81	51
STONEVILLE 213 MISSISSIPPI TENNESSEE		1 2	6.6 6.6	99 97	33 32	1914 1862	6.5 6.9	4.8 4.9	90 100	80 75	18 30	216 163	57 52
STONEVILLE 506 MISSISSIPPI		1	6.9	101	32	1911	6.6	4.9	100	80	24	74	57
STONEVILLE 825 ALABAMA ARKANSAS GEORGIA LOUISIANA MISSISSIPPI		2 3 2 2 2	6.7 6.5 6.8 6.9 7.0	102 99 92 103 97	36 33 31 35 33	2010 1926 1769 1990 1892	6.8 5.6 6.5 6.2 6.2	5.2 5.0 4.3 4.7 4.5	95 100 100 90 105	75 80 75 70 75	32 19 28 55 34	217 137 95 256 156	61 57 48 60 56
VAIL 7 ARKANSAS		1	5.4	104	37	2069	7.1	5.5	100	70	18	284	68
LONG STAPLE													
ACALA SJ-2 CALIFORNIA		2	6.6	126	47	2556	6.6	5.2	105	75	18	86	72
COKER 310 GEORGIA		2	7.7	112	41	2252	6.5	5.1	110	75	16	62	73

TABLE 5.--COTTON: AMERICAN UPLAND SHORT STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
GRADE NAME CODE		STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
SOUTHWEST														
CENTRAL TEXAS														
AQUILLA														
GP 3774														
LM 51 [1]		31	1.01	79	35	22	23 (100 PERCENT)	5.7	3.3	4.6	78.2	9.4	21-3	0.43
COVINGTON														
LANKART LX 571														
M LT SP 32		31	1.01	80	45	24	25 (96 PERCENT)	6.2	1.8	2.9	74.5	10.9	22-1	0.47
M LT SP 32		31	0.97	81	46	23	23	6.1	2.6	3.9	76.2	10.6	22-1	0.38
MOODY														
LANKART 57														
SLM LT SP 42		31	0.96	81	38	23	23 (75 PERCENT)	6.8	2.7	3.8	76.5	9.3	31-3	0.60
M LT SP 32		31	0.96	82	40	23	21	6.5	2.0	3.6	77.5	9.3	21-4	0.59
NORTHWEST TEXAS														
BULA														
TAMCOT SP-21														
M LT SP 32		30	0.90	79	37	23	22 (90 PERCENT)	6.2	2.6	4.2	77.3	10.2	21-3	0.54
SLM LT SP 42		31	0.93	80	34	24	22	6.4	2.7	4.6	73.5	10.4	32-1	0.56
LEVELLAND														
CASCOT B-2														
SLM LT SP 42		30	0.93	79	36	23	21 (75 PERCENT)	6.5	2.6	4.1	77.5	9.7	21-3	0.50
SLM LT SP 42		33	0.97	80	34	25	21	6.7	2.0	3.8	76.0	10.1	22-1	0.46
LEVELLAND														
GSA-71														
SLM LT SP 42		31	0.93	80	43	21	21 (70 PERCENT)	6.2	2.3	3.5	76.7	10.4	22-1	0.54
SLM LT SP 42 [2]		30	0.90	80	41	22	21	6.7	1.8	2.7	74.7	10.6	22-2	0.45
LORENZO														
PAYMASTER 792														
SLM LT SP 42		32	1.02	82	40	24	25 (90 PERCENT)	5.1	3.5	4.6	79.0	9.8	11-4	0.41
SLM LT SP 42		32	1.00	82	44	26	24	6.3	3.1	4.2	76.2	8.8	31-3	0.47

[1] REDUCED FROM 41 BECAUSE OF BARK.
[2] REDUCED FROM 32 BECAUSE OF BARK.

TABLE 5.--CONTINUED

| PRODUCTION AREA AND CLASSIFICATION | | | PICKER & CARD WASTE | YARN PROPERTIES | | | | | | | | | | |
NAME / GRADE	CODE	STAPLE 32ND IN.	PCT.	STRENGTH 8s LBS.	STRENGTH 22s LBS.	BR. FACTOR AVG. NO.	ELONGATION 8s PCT.	ELONGATION 22s PCT.	APPEARANCE 8s INDEX	APPEARANCE 22s INDEX	NEPS 8s NO.	NEPS 22s NO.	SPINNING POTENTIAL NO.
SOUTHWEST													
CENTRAL TEXAS													
AQUILLA													
GP 3774			100 PERCENT										
LM	51 [1]	31	6.8 [2]	309	101	2347	7.6	7.0	120	100	0	32	58
COVINGTON													
LANKART LX 571			96 PERCENT										
M LT SP	32	31	6.2	309	98	2314	7.3	6.9	120	110	6	16	52
M LT SP	32	31	5.7	336	105	2499	7.4	6.8	120	120	10	12	59
MOODY													
LANKART 57			75 PERCENT										
SLM LT SP	42	31	7.1 [2]	339	101	2467	7.3	6.4	100	100	6	10	52
M LT SP	32	31	6.6 [2]	320	97	2347	7.3	6.7	110	110	4	20	46
NORTHWEST TEXAS													
BULA													
TAMCOT SP-21			90 PERCENT										
M LT SP	32	30	6.7	284	90	2126	7.5	6.9	110	110	6	40	39
SLM LT SP	42	31	8.3	324	102	2418	8.4	8.1	90	80	0	20	55
LEVELLAND													
CASCOT B-2			75 PERCENT										
SLM LT SP	42	30	6.7 [2]	304	92	2228	8.0	7.1	100	100	2	26	48
SLM LT SP	42	33	6.0	309	98	2314	8.2	7.6	90	90	4	28	56
LEVELLAND													
GSA-71			70 PERCENT										
SLM LT SP	42	31	6.5	307	96	2284	8.4	7.6	110	100	10	18	49
SLM LT SP	42 [3]	30	6.5	299	88	2164	7.9	7.2	110	110	2	20	14 [4]
LORENZO													
PAYMASTER 792			90 PERCENT										
SLM LT SP	42	32	7.1	345	118	2678	7.5	7.1	100	100	8	150	70
SLM LT SP	42	32	6.3	339	104	2500	8.1	7.5	100	100	0	22	63

[1] REDUCED FROM 41 BECAUSE OF BARK.
[2] COTTON STUCK TO PROCESSING ROLLS.
[3] REDUCED FROM 32 BECAUSE OF BARK.
[4] THIS IS AN ESTIMATED VALUE BELOW THE RANGE OF THE TEST.

TABLE 5.--CONTINUED

NAME	GRADE	CODE	STAPLE 32ND IN.	FIBER LENGTH HVI UHM / UHM IN.	M/UHM UNIF. PCT.	MICRONAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	SHIRLEY ANALYZER NONLINT VISIBLE WASTE PCT.	TOTAL WASTE PCT.	COLOR OF RAW STOCK Rd PCT.	+b UNITS	COLOR CODE NO.	SUGAR CONTENT PCT.
SOUTHWEST															
NORTHWEST TEXAS															
MAPLE			STRIPPER 31												
	SLM LT SP	42	30	0.89	78	35	21	21	6.1	2.0	3.9	76.3	10.2	22-1	0.58
	M LT SP	32	30	0.92	78	34	24	22	6.8	1.4	3.2	78.5	10.3	11-4	0.78
								95 PERCENT							
PADUCAH			LANKART 611												
	M LT SP	32	31	0.93	80	39	24	22	7.0	1.4	2.6	77.2	9.9	21-3	0.46
	SLM LT SP	42	32	0.96	80	35	26	22	6.8	1.8	3.3	71.9	10.0	32-2	0.55
								80 PERCENT							
ROTAN			TAMCOT SP-21												
	M LT SP	32	31	0.93	79	37	21	22	5.6	1.7	3.1	79.5	10.0	11-4	0.43
	M LT SP	32	31	0.99	80	39	23	23	6.2	1.4	2.1	78.5	9.4	21-3	0.48
								80 PERCENT							
SNYDER			WESTERN 44												
	M LT SP	32	31	0.93	79	36	21	20	6.3	1.4	2.9	78.3	11.0	12-1	0.54
	SLM LT SP	42	31	0.98	80	37	25	22	6.9	2.3	3.6	75.5	10.3	22-2	0.50
								75 PERCENT							
STAMFORD			LANKART 611												
	M	31	31	0.97	80	45	23	21	6.6	0.7	2.3	79.0	10.0	11-4	0.33
	M LT SP	32	31	0.98	81	41	22	21	6.8	1.5	2.6	77.0	10.0	21-3	0.44
								80 PERCENT							
OKLAHOMA															
GRANITE			LANKART 57												
	SLM LT SP	42	31	0.99	81	41	23	23	6.4	1.9	3.2	77.0	10.2	21-3	0.45
	SLM LT SP	42	32	0.99	80	41	23	23	6.2	2.4	3.8	73.0	10.3	32-1	0.45
								95 PERCENT							

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION				PICKER & CARD WASTE	YARN PROPERTIES									
NAME	GRADE	CODE	STAPLE 32ND IN.		STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
				PCT.	8s LBS.	22s LBS.	BR. FACTOR AVG. NO.	8s PCT.	22s PCT.	8s INDEX	22s INDEX	8s NO.	22s NO.	NO.

SOUTHWEST

NORTHWEST TEXAS

MAPLE — STRIPPER 31 — 95 PERCENT

| MAPLE | SLM LT SP | 42 | 30 | 6.6 | 283 | 93 | 2155 | 7.3 | 7.0 | 100 | 80 | 4 | 16 | 36 |
| | M LT SP | 32 | 30 | 6.3 | 306 | 101 | 2335 | 7.8 | 7.3 | 110 | 100 | 4 | 12 | 46 |

PADUCAH — LANKART 611 — 80 PERCENT

| PADUCAH | M LT SP | 32 | 31 | 5.7 | 303 | 94 | 2246 | 8.0 | 7.5 | 110 | 110 | 6 | 26 | 51 |
| | SLM LT SP | 42 | 32 | 6.0 | 302 | 95 | 2253 | 8.7 | 7.7 | 100 | 100 | 0 | 38 | 54 |

ROTAN — TAMCOT SP-21 — 80 PERCENT

| ROTAN | M LT SP | 32 | 31 | 5.9 | 322 | 101 | 2399 | 7.7 | 7.1 | 110 | 90 | 4 | 14 | 54 |
| | M LT SP | 32 | 31 | 5.0 1/ | 326 | 99 | 2393 | 8.1 | 7.2 | 100 | 90 | 4 | 14 | 59 |

SNYDER — WESTERN 44 — 75 PERCENT

| SNYDER | M LT SP | 32 | 31 | 6.3 | 315 | 98 | 2338 | 7.8 | 7.3 | 100 | 90 | 8 | 20 | 49 |
| | SLM LT SP | 42 | 31 | 6.5 | 326 | 103 | 2437 | 8.1 | 7.5 | 100 | 100 | 2 | 20 | 53 |

STAMFORD — LANKART 611 — 80 PERCENT

| STAMFORD | M | 31 | 31 | 5.1 | 308 | 96 | 2288 | 8.0 | 7.2 | 100 | 100 | 4 | 76 | 49 |
| | M LT SP | 31 | 32 | 6.6 1/ | 316 | 95 | 2309 | 8.3 | 7.6 | 100 | 90 | 2 | 28 | 56 |

OKLAHOMA

GRANITE — LANKART 57 — 95 PERCENT

| GRANITE | SLM LT SP | 42 | 31 | 6.9 | 309 | 96 | 2292 | 7.8 | 7.4 | 120 | 110 | 0 | 26 | 48 |
| | SLM LT SP | 42 | 32 | 6.5 | 315 | 97 | 2327 | 9.0 | 7.5 | 100 | 100 | 4 | 4 | 52 |

1 COTTON STUCK TO PROCESSING ROLLS.

TABLE 5A.-COTTON: AMERICAN UPLAND SHORT STAPLE QUALITY CHARACTERISTICS OF YARN SPUN ON AN OPEN-END FRAME, BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

| PRODUCTION AREA AND CLASSIFICATION | | | YARN PROPERTIES | | | |
| CRADE : STAPLE | | | STRENGTH | ELONGATION | APPEARANCE | NEPS |
NAME	CODE	STAPLE 32ND IN.	8s LBS.	8s PCT.	INDEX 8s	8s NO.
SOUTHWEST						
CENTRAL TEXAS						
AQUILLA — GP 3774						
LM	51[1]	31	262	7.1	100 PERCENT	110	0
COVINGTON — LANKART LX 571						
M LT SP	32	31	246	6.8	96 PERCENT	110	0
M LT SP	32	31	253	6.6		110	2
MOODY — LANKART 57						
SLM LT SP	42	31	250	7.3	75 PERCENT	110	0
M LT SP	32	31	249	7.3		120	2
NORTHWEST TEXAS						
BULA — TAMCOT SP-21						
M LT SP	32	30	233	7.0	90 PERCENT	110	4
SLM LT SP	42	31	265	8.4		110	2
LEVELLAND — CASCOT B-2						
SLM LT SP	42	30	244	7.3	75 PERCENT	110	2
SLM LT SP	42	33	251	7.8		110	0
LEVELLAND — CSA-71						
SLM LT SP	42	31	256	7.7	70 PERCENT	110	12
SLM LT SP	42[2]	30	237	7.5		110	0

[1] REDUCED FROM 41 BECAUSE OF BARK.
[2] REDUCED FROM 32 BECAUSE OF BARK.

TABLE 5A. - CONTINUED

| PRODUCTION AREA AND CLASSIFICATION | | | | YARN PROPERTIES | | | |
NAME	CODE GRADE	CODE : STAPLE	32ND IN.	STRENGTH 8s LBS.	ELONGATION 8s PCT.	APPEARANCE 8s INDEX	NLPS 8s NO.
SOUTHWEST							
NORTHWEST TEXAS							
LORENZO	PAYMASTER 792						
	SLM LT SP	42	32	283	6.9	90 PERCENT	110	2
	SLM LT SP	42	32	265	7.5		110	2
MAPLE	STRIPPER 31						
	SLM LT SP	42	30	246	7.4	95 PERCENT	110	0
	M LT SP	32	30	254	7.5		110	0
PADUCAH	LANKART 611						
	M LT SP	32	31	241	7.8	80 PERCENT	110	2
	SLM LT SP	42	32	243	8.0		110	24
ROTAN	IAMCOT SP-21						
	M LT SP	32	31	257	7.4	80 PERCENT	100	0
	M LT SP	32	31	252	7.5		100	0
SNYDER	WESTERN 44						
	M LT SP	32	31	234	7.0	75 PERCENT	110	0
	SLM LT SP	42	31	268	7.7		110	0
STAMFORD	LANKART 511						
	M	31	31	236	7.2	80 PERCENT	110	0
	M LT SP	32	31	240	7.7		110	0
OKLAHOMA							
GRANITE	LANKART 57						
	SLM LT SP	42	31	249	7.5	95 PERCENT	110	0
	SLM LT SP	42	32	252	8.1		100	0

TABLE 6.--COTTON: AMERICAN UPLAND MEDIUM STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
GRADE		STAPLE	HVI UHM	M/UHM UNIF.		HVI	STEL.		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SOUTHEAST														
ALABAMA DEATSVILLE			DELTAPINE 41			100 PERCENT								
SLM	41	34	1.09	80	40	25	23	6.2	1.5	2.4	73.0	9.4	31-4	0.21
SLM	41	35	1.10	80	39	25	22	6.8	1.3	2.3	74.0	8.8	31-4	0.21
HAMILTON			MCNAIR 235			80 PERCENT								
SLM	41	35	1.10	82	47	24	22	5.9	1.3	2.4	73.5	8.5	41-3	0.18
SLM	41	35	1.07	81	44	24	20	5.9	1.1	2.0	72.3	7.6	41-2	0.11
HARPERSVILLE			STONEVILLE 213			90 PERCENT								
LM	51	35	1.10	82	46	24	23	5.5	2.9	4.4	72.0	8.8	41-3	0.17
LM	51	35	1.13	82	43	25	22	6.0	2.4	3.5	72.5	8.2	41-3	0.16
SULLIGENT			STONEVILLE 825			100 PERCENT								
LM PLUS	50	35	1.13	81	45	24	22	5.5	2.2	3.5	72.8	7.7	41-2	0.19
LM	51	35	1.12	81	41	24	22	6.7	2.5	4.0	69.5	8.2	51-3	0.19
TYLER			DELTAPINE 61			100 PERCENT								
SLM	41	36	1.17	82	41	25	24	6.6	1.5	2.4	76.2	8.2	31-2	0.27
SLM	41	36	1.09	81	42	26	24	7.1	1.7	2.5	73.5	8.5	41-3	0.18
GEORGIA ELBERTON			COKER 315			90 PERCENT								
SLM LT SP	42	36	1.16	80	42	27	24	5.9	2.4	3.4	70.8	8.6	41-4	0.17
LM LT SP	52	35	1.20	81	43	27	24	5.8	3.3	4.7	69.0	8.3	51-3	0.18
OMEGA			MCNAIR 220			80 PERCENT								
SLM	41	36	1.11	81	44	24	22	5.7	1.6	2.7	77.0	7.8	31-2	0.24
LM	51 1/	36	1.10	81	43	26	23	5.6	3.4	4.7	72.5	7.6	41-2	0.26

1 AVERAGING RULE USED.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			PICKER & CARD WASTE	YARN PROPERTIES									
GRADE		STAPLE		STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
NAME CODE		32ND IN.		22s : 50s : BR. FACTOR			22s : 50s		22s : 50s		22s : 50s		
			PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.

SOUTHEAST

ALABAMA
DEATSVILLE   DELTAPINE 41   100 PERCENT

| SLM | 41 | 34 | 5.7 | 102 | 35 | 1997 | 6.8 | 5.1 | 110 | 80 | 30 | 120 | 59 |
| SLM | 41 | 35 | 5.4 | 103 | 35 | 2008 | 7.0 | 5.0. | 110 | 80 | 26 | 114 | 64 |

HAMILTON   MCNAIR 235   80 PERCENT

| SLM | 41 | 35 | 5.9 | 97 | 33 | 1892 | 6.3 | 4.8 | 110 | 80 | 18 | 188 | 56 |
| SLM | 41 | 35 | 4.3 | 98 | 34 | 1928 | 6.4 | 5.0 | 100 | 80 | 28 | 148 | 59 |

HARPERSVILLE   STONEVILLE 213   90 PERCENT

| LM | 51 | 35 | 7.1 | 99 | 34 | 1939 | 6.4 | 4.8 | 100 | 80 | 36 | 150 | 60 |
| LM | 51 | 35 | 7.0 | 102 | 34 | 1972 | 6.5 | 5.1 | 100 | 80 | 28 | 184 | 62 |

SULLIGENT   STONEVILLE 825   100 PERCENT

| LM PLUS | 50 | 35 | 7.0 | 100 | 35 | 1975 | 6.4 | 5.0 | 100 | 80 | 52 | 272 | 59 |
| LM | 51 | 35 | 6.3 | 104 | 36 | 2044 | 7.1 | 5.4 | 90 | 70 | 12 | 162 | 62 |

TYLER   DELTAPINE 61   100 PERCENT

| SLM | 41 | 36 | 5.6 | 114 | 39 | 2229 | 7.5 | 5.6 | 100 | 80 | 2 | 118 | 75 |
| SLM | 41 | 36 | 6.1 | 103 | 35 | 2008 | 6.9 | 5.2 | 110 | 80 | 18 | 210 | 63 |

GEORGIA
ELBERTON   COKER 315   90 PERCENT

| SLM LT SP | 42 | 36 | 7.1 | 111 | 39 | 2196 | 6.9 | 5.5 | 100 | 80 | 54 | 180 | 70 |
| LM LT SP | 52 | 35 | 7.2 | 107 | 39 | 2152 | 7.0 | 5.0 | 100 | 80 | 16 | 54 | 71 |

OMEGA   MCNAIR 220   80 PERCENT

| SLM | 41 | 36 | 6.6 | 103 | 34 | 1983 | 6.8 | 5.0 | 110 | 80 | 20 | 88 | 60 |
| LM | 51 1/ | 36 | 7.8 | 113 | 42 | 2293 | 6.7 | 4.7 | 100 | 80 | 24 | 48 | 61 |

1 AVERAGING RULE USED.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
NAME	GRADE		HVI UHM	M/UHM UNIF		HVI	STEL.		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
		STAPLE												
	CODE	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
GEORGIA														
SYCAMORE	COKER 304					75 PERCENT								
M	31	35	1.09	81	45	23	23	6.2	1.3	2.2	75.0	8.9	31-4	0.25
SLM	41	35	1.11	81	40	24	23	6.2	1.6	2.5	75.2	7.8	41-1	0.25
WATKINSVILLE	STONEVILLE 825					100 PERCENT								
SLM LT SP	42	35	1.07	81	48	21	21	5.7	1.7	2.7	71.8	9.1	41-3	0.15
SLM LT SP	42	35	1.08	81	49	20	21	5.4	2.1	3.6	71.7	8.9	41-3	0.17
NORTH CAROLINA														
SEABOARD	MCNAIR 220					72 PERCENT								
SLM	41	35	1.05	81	42	25	23	5.7	1.8	3.0	72.3	8.6	41-3	0.22
SLM LT SP	42	34	1.04	81	45	22	24	5.6	1.1	2.1	72.3	8.8	41-3	0.19
SOUTH CAROLINA														
HARTSVILLE	COKER 315					95 PERCENT								
SLM	41	36	1.13	81	44	25	22	6.2	2.2	3.0	73.5	8.8	41-3	0.17
SLM	41	35	1.07	81	44	21	21	6.1	1.3	3.3	73.8	8.2	41-3	0.15
SOUTH CENTRAL														
ARKANSAS														
BAY	STONEVILLE 825					100 PERCENT								
SLM LT SP	42	34	1.04	80	50	24	23	5.0	1.7	2.7	72.3	8.3	41-3	0.24
BLYTHEVILLE	STONEVILLE 213					80 PERCENT								
SLM LT SP	42	36	1.08	82	50	26	24	6.0	2.2	3.0	74.5	9.5	31-3	0.24
SLM LT SP	42	35	1.10	80	43	26	23	6.1	1.6	2.8	75.8	8.8	31-3	0.17
CRAWFORDSVILLE	DELTAPINE 41					100 PERCENT								
LM	51	36	1.12	80	36	25	24	6.3	3.0	4.4	72.2	8.5	41-3	0.22
SLM LT SP	42	36	1.13	81	39	23	23	7.4	1.6	2.9	74.0	10.4	22-2	0.43

TABLE 6.--CONTINUED

| PRODUCTION AREA AND CLASSIFICATION | | | PICKER & CARD WASTE | YARN PROPERTIES | | | | | | | | |
| | | | | STRENGTH | | | ELONGATION | | APPEARANCE | | NEPS | | SPINNING POTENTIAL |
NAME GRADE	CODE	STAPLE 32ND IN.	PCT.	22s LBS.	50s LBS.	BR. FACTOR AVG. NO.	22s PCT.	50s PCT.	22s INDEX	50s INDEX	22s NO.	50s NO.	NO.
GEORGIA													
SYCAMORE			COKER 304			75 PERCENT							
M	31	35	5.7	101	35	1986	6.5	5.0	100	80	34	152	61
SLM	41	35	6.0	100	35	1975	6.6	4.9	110	70	34	78	62
WATKINSVILLE			STONEVILLE 825			100 PERCENT							
SLM LT SP	42	35	6.6	91	32	1801	6.6	3.8	100	70	26	80	55
SLM LT SP	42	35	6.9	92	29	1737	6.4	4.7	100	80	30	110	41
NORTH CAROLINA													
SEABOARD			MCNAIR 220			72 PERCENT							
SLM	41	35	6.0	106	37	2091	6.5	5.4	110	90	8	82	59
SLM LT SP	42	34	5.7	107	36	2077	6.3	4.8	100	80	30	68	57
SOUTH CAROLINA													
HARTSVILLE			COKER 315			95 PERCENT							
SLM	41	36	6.3	101	36	2011	6.5	5.1	100	80	28	210	61
SLM	41	35	6.5	93	31	1798	6.8	4.9	100	70	40	148	49
SOUTH CENTRAL													
ARKANSAS													
BAY			STONEVILLE 825			100 PERCENT							
SLM LT SP	42	34	7.0	91	28	1701	5.8	4.0	100	70	24	200	43
BLYTHEVILLE			STONEVILLE 213			80 PERCENT							
SLM LT SP	42	36	7.7	99	32	1889	6.1	4.8	100	80	34	134	54
SLM LT SP	42	35	6.2	101	34	1961	6.6	5.0	100	80	22	180	51
CRAWFORDSVILLE			DELTAPINE 41			100 PERCENT							
IM	51	36	7.9	114	40	2254	6.7	5.3	100	80	12	146	67
SLM LT SP	42	36	6.0	111	42	2271	7.8	4.9	100	80	30	102	79

TABLE 6.-- CONTINUED

NAME	GRADE	CODE	STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	M/UHM UNIF. PCT.	MICRO-NAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	SHIRLEY ANALYZER NONLINT VISIBLE WASTE PCT.	TOTAL WASTE PCT.	COLOR OF RAW STOCK Rd PCT.	+b UNITS	COLOR CODE NO.	SUGAR CONTENT PCT.
ARKANSAS															
DUMAS			STONEVILLE 825					100 PERCENT							
SLM	41	36		1.16	81	44	25	24	6.0	1.7	2.6	74.0	8.6	41-3	0.15
SLM	41	36		1.15	81	45	26	22	6.5	1.8	2.6	74.5	8.5	31-4	0.17
HAYNES			DELTAPINE 41					90 PERCENT							
SLM	41	36		1.15	82	53	25	24	7.1	1.6	2.3	71.5	7.9	41-4	0.14
SLM LT SP	42	36		1.15	83	51	25	23	7.3	2.0	2.9	72.0	8.7	41-3	0.16
LEACHVILLE			VAIL 7					100 PERCENT							
SLM LT SP	42	34		1.11	81	46	25	23	6.0	1.4	2.8	74.0	8.3	41-3	0.22
MCGEHEE			STONEVILLE 213					75 PERCENT							
SLM	41	36		1.14	81	46	25	23	5.5	1.9	2.9	74.5	8.6	31-4	0.18
SLM	41	36		1.12	81	46	24	23	5.7	1.5	2.4	75.5	7.7	41-1	0.21
PINE BLUFF			DELTAPINE 61					80 PERCENT							
SLM LT SP	42	36		1.18	81	46	28	25	6.2	1.8	3.1	72.8	8.4	41-3	0.17
SLM	41	36		1.17	80	43	26	24	5.6	2.0	3.1	74.8	8.4	31-4	0.21
WINCHESTER			DELTAPINE 55					90 PERCENT							
SLM	41	36		1.14	81	46	25	23	6.3	1.7	2.8	73.5	8.2	41-3	0.17
SLM	41	36		1.15	81	47	24	22	5.9	1.6	2.6	74.5	8.1	41-1	0.19
LOUISIANA															
BOSSIER CITY			DELTAPINE 61					80 PERCENT							
SLM LT SP	42	36		1.11	81	43	26	24	7.1	2.2	3.4	72.2	8.9	41-3	0.17
SLM	41	35		1.09	81	44	23	24	7.1	1.3	2.3	74.2	8.3	41-3	0.14
BOYCE			DELTAPINE 55					98 PERCENT							
SLM	41	35		1.10	80	46	24	23	6.3	1.3	2.5	74.0	8.5	41-3	0.14
SLM	41	35		1.09	81	43	22	22	5.8	1.2	2.5	76.8	8.6	31-3	0.18

TABLE 6.--CONTINUED

NAME	GRADE CODE	STAPLE 32ND IN.	PICKER & CARD WASTE PCT.	STRENGTH 22s LBS.	STRENGTH 50s LBS.	:BR. FACTOR AVG. NO.	ELONGATION 22s PCT.	ELONGATION 50s PCT.	APPEARANCE 22s INDEX	APPEARANCE 50s INDEX	NEPS 22s NO.	NEPS 50s NO.	SPINNING POTENTIAL NO.
ARKANSAS													
DUMAS			STONEVILLE 825			100 PERCENT							
SLM	41	36	5.7	106	37	2091	6.3	4.9	100	90	20	104	63
SLM	41	36	6.9	101	35	1986	4.8	6.1	100	80	12	108	64
HAYNES			DELTAPINE 41			90 PERCENT							
SLM	41	36	6.2	109	39	2174	7.0	5.5	120	90	26	138	69
SLM LT SP	42	36	6.9	104	36	2044	6.5	5.1	110	80	24	138	64
LEACHVILLE			VAIL 7			100 PERCENT							
SLM LT SP	42	34	5.4	104	37	2069	7.1	5.5	100	70	18	284	68
MCGEHEE			STONEVILLE 213			75 PERCENT							
SLM	41	36	6.5	98	33	1903	6.0	4.4	110	80	16	180	59
SLM	41	36	6.3	102	37	2047	6.6	4.6	110	70	2	46	64
PINE BLUFF			DELTAPINE 61			80 PERCENT							
SLM LT SP	42	36	7.3	110	37	2135	6.5	4.8	90	70	50	204	65
SLM	41	36	6.6	111	39	2196	6.4	4.9	110	70	48	518	63
WINCHESTER			DELTAPINE 55			90 PERCENT							
SLM	41	36	6.0	105	36	2055	6.4	4.8	100	80	16	116	61
SLM	41	36	6.1	99	34	1939	6.0	4.7	110	70	18	282	62
LOUISIANA													
BOSSIER CITY			DELTAPINE 61			80 PERCENT							
SLM LT SP	42	36	6.7	108	37	2113	6.6	5.0	100	80	36	98	64
SLM	41	35	5.8	104	38	2094	6.9	5.0	110	80	4	52	59
BOYCE			DELTAPINE 55			98 PERCENT							
SLM	41	35	5.4	98	33	1903	6.2	4.5	100	70	46	216	58
SLM	41	35	6.5	102	33	1947	6.2	4.7	100	70	20	64	63

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
NAME	GRADE CODE	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
LOUISIANA JONESVILLE			DELTAPINE 41			98 PERCENT								
SLM	41	35	1.10	81	43	24	22	5.7	1.5	2.8	73.3	8.1	41-3	0.18
LM	51	35	1.10	81	44	23	22	5.2	3.2	4.5	72.8	8.3	41-3	0.16
LAKE PROVIDENCE			STONEVILLE 825			100 PERCENT								
LM PLUS	50	36	1.14	82	43	25	23	5.8	2.2	3.3	72.3	8.1	41-4	0.15
LM	51	35	1.08	81	42	23	21	5.1	3.0	4.8	72.0	7.6	41-2	0.17
MISSISSIPPI ARCOLA			STONEVILLE 825			100 PERCENT								
LM PLUS	50	36	1.11	81	47	25	23	5.2	1.8	2.8	76.7	8.3	31-2	0.26
BRUCE			STONEVILLE 825			90 PERCENT								
SLM	41	35	1.13	82	45	25	23	5.2	2.2	3.3	72.5	8.6	41-3	0.17
LM	51	36	1.15	82	46	24	23	5.8	2.7	3.6	73.8	8.2	41-3	0.16
DUNCAN			DELTAPINE 41			100 PERCENT								
LM	51	36	1.12	80	41	25	25	5.5	2.9	4.2	73.0	8.7	41-3	0.29
GREENVILLE			STONEVILLE 213			100 PERCENT								
SLM	41	36	1.12	81	46	24	23	6.2	1.6	2.6	76.2	9.1	31-3	0.39
INDIANOLA			DES 422			100 PERCENT								
LM PLUS	50	36	1.12	81	44	24	22	5.6	2.9	4.0	74.5	8.4	41-3	0.32
LELAND			STONEVILLE 506			100 PERCENT								
LM	51	36	1.13	80	40	25	24	5.8	1.9	3.1	71.8	7.9	41-4	0.14
LELAND			STONEVILLE 825			100 PERCENT								
LM	51	36	1.15	81	43	25	22	5.2	2.3	3.4	70.3	7.4	51-1	0.14

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			PICKER & CARD WASTE	YARN PROPERTIES										
NAME	GRADE CODE	STAPLE 32ND IN.		STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
				22s	50s	:BR. FACTOR	22s	50s	22s	50s	22s	50s	
			PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
LOUISIANA JONESVILLE			DELTAPINE 41			98 PERCENT							
SLM	41	35	6.6	102	33	1947	5.9	4.5	100	70	60	164	60
LM	51	35	8.1	105	36	2055	6.2	4.7	110	70	30	114	57
LAKE PROVIDENCE			STONEVILLE 825			100 PERCENT							
LM PLUS	50	36	6.0	103	35	2008	6.0	4.5	90	70	52	210	60
LM	51	35	7.8	102	34	1972	6.3	4.8	90	70	58	302	60
MISSISSIPPI ARCOLA			STONEVILLE 825			100 PERCENT							
LM PLUS	50	36	6.5	99	33	1914	6.5	4.5	100	80	34	74	57
BRUCE			STONEVILLE 825			90 PERCENT							
SLM	41	35	7.0	101	36	2011	6.0	4.8	120	80	44	160	61
LM	51	36	7.0	108	38	2138	6.2	4.7	110	80	22	58	69
DUNCAN			DELTAPINE 41			100 PERCENT							
LM	51	36	7.3	109	39	2174	6.4	5.0	100	70	46	296	65
GREENVILLE			STONEVILLE 213			100 PERCENT							
SLM	41	36	6.6	99	33	1914	6.5	4.8	90	80	18	216	57
INDIANOLA			DES 422			100 PERCENT							
LM PLUS	50	36	7.2	106	36	2066	6.5	5.0	100	80	22	88	60
LELAND			STONEVILLE 506			100 PERCENT							
LM	51	36	6.9	101	32	1911	6.6	4.9	100	80	24	74	57
LELAND			STONEVILLE 825			100 PERCENT							
LM	51	36	7.4	95	33	1870	5.8	4.5	110	70	34	238	55

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION				FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
NAME	GRADE	CODE	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
MISSISSIPPI ROBINSONVILLE				DELTAPINE 55											
	SLM LT SP	42	36	1.14	81	41	26	100 PERCENT 23	5.8	3.1	4.5	73.5	9.4	31-4	0.18
SARDIS				MCNAIR 235				90 PERCENT							
	LM LT SP	52	36	1.10	80	41	25	23	5.8	3.7	5.3	67.5	9.2	42-2	0.20
	LM LT SP	52	35	1.13	80	41	26	23	5.5	3.9	5.0	70.0	8.8	41-4	0.19
STOVALL				DES 56				100 PERCENT							
	SLM	41	36	1.13	80	44	25	23	6.3	2.3	3.8	73.5	8.4	41-3	0.18
VALLEY PARK				DELTAPINE 61				95 PERCENT							
	SLM LT SP	42	36	1.15	81	44	25	23	6.5	2.7	4.0	72.2	8.7	41-3	0.17
MISSOURI WARDELL				STONEVILLE 825				95 PERCENT							
	SLM	41	35	1.08	82	54	26	22	5.3	2.0	3.0	76.2	8.8	31-3	0.21
	SLM	41	35	1.10	82	52	25	24	5.8	1.9	3.0	75.2	8.0	41-1	0.24
TENNESSEE MASON				STONEVILLE 213				100 PERCENT							
	SLM	41	35	1.07	81	48	25	23	6.6	1.6	2.7	74.0	9.2	31-4	0.25
	SLM LT SP	42	35	1.08	80	46	26	23	7.2	2.2	3.0	74.8	9.2	31-4	0.31
MAURY CITY				STONEVILLE 825				90 PERCENT							
	SLM	41	35	1.09	80	45	25	23	6.1	1.4	2.4	76.5	8.2	31-2	0.25
	SLM LT SP	42	35	1.09	80	43	25	22	6.1	1.9	3.0	74.5	8.4	41-3	0.21

TABLE 6.--CONTINUED

| PRODUCTION AREA AND CLASSIFICATION | | | PICKER & CARD WASTE | STRENGTH | | :BR. FACTOR | ELONGATION | | APPEARANCE | | NEPS | | SPINNING POTENTIAL |
| | | | | 22s | 50s | | 22s | 50s | 22s | 50s | 22s | 50s | |
NAME	CODE	GRADE : STAPLE 32ND IN.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
MISSISSIPPI ROBINSONVILLE			DELTAPINE 55			100 PERCENT							
SLM LT SP 42		36	7.3	98	36	1978	6.5	5.0	100	70	28	214	61
SARDIS			MCNAIR 235			90 PERCENT							
LM LT SP 52		36	9.3	101	35	1986	6.0	4.5	100	80	44	108	61
LM LT SP 52		35	9.2	109	40	2199	6.4	4.7	100	80	14	60	66
STOVALL			DES 56			100 PERCENT							
SLM 41		36	6.9	98	32	1878	6.4	5.0	100	70	24	190	56
VALLEY PARK			DELTAPINE 61			95 PERCENT							
SLM LT SP 42		36	7.6	105	36	2055	6.9	5.3	100	70	40	260	67
MISSOURI WARDELL			STONEVILLE 825			95 PERCENT							
SLM 41		35	7.1	100	30	1850	5.8	4.1	100	80	50	226	51
SLM 41		35	6.4	100	32	1900	6.0	4.4	100	70	34	182	53
TENNESSEE MASON			SIONEVILLE 213			100 PERCENT							
SLM 41		35	6.4	94	30	1784	6.7	5.0	100	70	26	190	50
SLM LT SP 42		35	6.7	99	34	1939	7.0	4.7	100	80	34	136	54
MAURY CITY			SIONEVILLE 825			90 PERCENT							
SLM 41		35	5.7	100	33	1925	6.4	4.7	100	70	26	82	54
SLM LT SP 42		35	6.4	97	39	2042	6.0	4.5	100	70	10	92	52

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION				FIBER LENGTH		MICRO- NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON- GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
NAME	GRADE	CODE	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
SOUTHWEST															
SOUTH TEXAS															
BROWNSVILLE				GP 3774				83 PERCENT							
	SLM LT SP	42	34	1.05	82	39	24	23	5.7	1.6	2.4	78.5	8.4	21-2	0.54
	SLM	41	34	1.03	82	41	24	24	5.9	1.5	2.6	78.5	8.2	31-1	0.70
GREGORY				TAMCOT SP-37				85 PERCENT							
	SLM	41	32	0.99	81	41	26	23	5.8	2.7	3.7	78.0	8.6	21-2	0.54
	SLM	41	31	0.97	81	41	24	22	6.1	1.6	2.7	79.5	8.6	21-2	0.62
LYFORD				STONEVILLE 213				99 PERCENT							
	SLM LT SP	42	34	1.07	83	50	25	24	6.0	1.7	2.3	75.2	9.3	31-3	0.66
	SLM LT SP	42	34	1.04	82	45	25	24	6.2	2.0	2.8	70.2	8.5	41-4	0.49
MISSION				MCNAIR 220				100 PERCENT							
	SLM	41	34	0.99	82	38	25	23	4.6	1.9	2.6	77.2	10.3	12-2	0.53
	M LT SP	32	34	1.01	82	40	26	24	5.2	1.4	2.7	76.3	9.4	21-4	0.62
ROBSTOWN				GP 3774				90 PERCENT							
	SLM	41	33	1.01	80	34	25	24	6.1	1.9	3.0	78.0	9.0	21-4	0.66
	SLM	41	32	1.01	81	38	25	22	6.2	1.0	1.8	76.2	8.9	31-3	0.62
SAN PERLITA				DELTAPINE 41				70 PERCENT							
	SLM	41	34	1.05	83	48	27	24	4.9	2.5	3.6	78.0	8.9	21-4	0.54
	SLM LT SP	42	33	1.04	82	45	24	23	5.6	1.4	2.3	71.7	8.2	41-4	0.54
SEBASTIAN				STONEVILLE 825				95 PERCENT							
	SLM	41	34	1.03	82	48	26	25	4.6	1.5	2.5	77.2	9.0	31-3	0.58
	SLM	41	34	1.04	82	47	25	23	5.2	1.9	2.3	75.5	8.8	31-4	0.61

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			PICKER & CARD WASTE	YARN PROPERTIES									
NAME / CODE	STAPLE 32ND IN.			STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
				22s LBS.	50s LBS.	:BR. FACTOR AVG. NO.	22s PCT.	50s PCT.	22s INDEX	50s INDEX	22s NO.	50s NO.	NO.
CRADE CODE			PCT.										

SOUTHWEST

SOUTH TEXAS
BROWNSVILLE — GP 3774 — 83 PERCENT

| SLM LT SP 42 | 34 | | 5.0 | 103 | 36 | 2033 | 6.7 | 5.6 | 110 | 90 | 14 | 110 | 57 |
| SLM 41 | 34 | | 6.6 | 100 | 34 | 1950 | 6.3 | 4.5 | 120 | 80 | 20 | 82 | 53 |

CRECORY — TAMCOT SP-37 — 85 PERCENT

| SLM 41 | 32 | | 7.4 | 93 | 31 | 1798 | 5.8 | 4.8 | 110 | 80 | 22 | 52 | 45 |
| SLM 41 | 31 | | 6.7 | 91 | 28 | 1701 | 6.2 | 4.0 | 110 | 80 | 10 | 86 | 47 |

LYFORD — STONEVILLE 213 — 99 PERCENT

| SLM LT SP 42 | 34 | | 6.8 | 104 | 38 | 2094 | 6.3 | 4.9 | 120 | 90 | 18 | 68 | 66 |
| SLM LT SP 42 | 34 | | 6.9 | 104 | 35 | 2019 | 6.0 | 4.6 | 130 | 100 | 30 | 98 | 58 |

MISSION — MCNAIR 220 — 100 PERCENT

| SLM 41 | 34 | | 6.2 | 112 | 39 | 2207 | 5.9 | 4.9 | 110 | 90 | 22 | 70 | 59 |
| M LT SP 32 | 34 | | 5.9 | 107 | 38 | 2127 | 5.9 | 4.7 | 110 | 90 | 10 | 72 | 61 |

ROBSTOWN — CP 3774 — 90 PERCENT

| SLM 41 | 33 | | 6.0 | 107 | 36 | 2077 | 6.7 | 5.2 | 110 | 80 | 12 | 46 | 65 |
| SLM 41 | 32 | | 5.9 | 99 | 32 | 1889 | 6.4 | 4.7 | 110 | 80 | 16 | 86 | 50 |

SAN PERLITA — DELTAPINE 41 — 70 PERCENT

| SLM 41 | 34 | | 7.2 | 107 | 36 | 2077 | 5.7 | 4.7 | 110 | 90 | 32 | 78 | 56 |
| SLM LT SP 42 | 33 | | 6.2 | 106 | 37 | 2091 | 5.8 | 4.4 | 120 | 100 | 16 | 44 | 60 |

SEBASTIAN — STONEVILLE 825 — 95 PERCENT

| SLM 41 | 34 | | 4.3 | 106 | 36 | 2066 | 5.5 | 4.4 | 120 | 100 | 12 | 78 | 57 |
| SLM 41 | 34 | | 6.2 | 103 | 35 | 2008 | 5.6 | 4.3 | 110 | 90 | 10 | 76 | 52 |

[1] COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION				FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH			STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
	GRADE : STAPLE			HVI UHM	M/UHM UNIF.		HVI	STEL.			VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	GRADE CODE		STAPLE 32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX		PGT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SOUTH TEXAS TAFT				TAMCOT SP-37H				95 PERCENT								
SLM	41		32	0.97	81	36	25	24		6.2	2.2	3.4	79.0	8.3	21-2	0.51
SLM	41		32	0.98	81	42	24	22		5.6	2.0	2.8	78.3	8.3	31-1	0.63
GENTRAL TEXAS BATESVILLE				STONEVILLE 213				75 PERGENT								
SLM LT SP	42		33	1.11	83	40	24	24		6.5	2.2	3.1	77.7	8.0	31-1	0.59
SLM	41		34	1.12	82	42	25	22		7.0	2.0	3.0	77.3	8.8	31-3	0.55
NAVASOTA				STONEVILLE 825				90 PERCENT								
SLM	41		34	1.06	82	46	24	23		5.7	2.6	3.5	79.3	7.8	31-1	0.60
SLM	41		34	1.07	80	46	23	23		5.5	1.6	3.0	76.2	8.5	31-4	0.33
NORTHWEST TEXAS BOVINA				TAMGOT GAMD E				80 PERGENT								
SLM LT SP	42		30	0.88	80	41	22	23		6.6	2.7	4.1	75.0	10.3	22-2	0.59
LM SP	53 [1]		31	0.88	80	33	25	22		7.9	2.4	4.1	71.0	11.9	23-4	0.52
FLOMOT				TAMGOT GAMD E				70 PERGENT								
SLM LT SP	42		32	0.97	81	41	24	23		6.6	3.2	4.7	77.5	10.6	12-2	0.56
SLM LT SP	42		32	1.00	81	37	26	25		6.0	3.1	4.5	74.5	9.6	31-3	0.53
LORENZO				PAYMASTER 303				80 PERCENT								
SLM LT SP	42		32	0.98	80	35	23	21		6.5	2.7	4.0	75.8	10.7	22-1	0.58
SLM LT SP	42		32	0.97	80	36	25	21		6.6	2.7	4.1	75.5	10.8	22-1	0.51
LORENZO				PAYMASTER 404				100 PERCENT								
SLM LT SP	42		31	0.96	80	39	27	24		6.3	2.3	3.4	76.0	9.9	21-4	0.63
SLM LT SP	42		31	0.94	80	40	25	23		7.0	3.2	4.7	73.5	9.2	31-4	0.39

[1] REDUCED FROM 43 BEGAUSE OF BARK.

TABLE 6.--CONTINUED

| PRODUCTION AREA AND CLASSIFICATION | | | PICKER & CARD WASTE | YARN PROPERTIES | | | | | | | | | SPINNING POTENTIAL |
| | | | | STRENGTH | | | ELONGATION | | APPEARANCE | | NEPS | | |
NAME / GRADE CODE	STAPLE 32ND IN.		PCT.	22s LBS.	50s LBS.	BR. FACTOR AVG. NO.	22s PCT.	50s PCT.	22s INDEX	50s INDEX	22s NO.	50s NO.	NO.
SOUTH TEXAS / TAFT — TAMCOT SP-37H						95 PERCENT							
SLM 41	32		6.4	103	36	2033	6.1	4.1	110	80	20	50	52
SLM 41	32		6.4	101	35	1986	6.0	4.6	110	80	8	90	50
CENTRAL TEXAS / BATESVILLE — STONEVILLE 213						75 PERCENT							
SLM LT SP 42	33		6.7	110	38	2160	6.5	4.8	110	90	38	112	65
SLM 41	34		5.9	111	37	2146	6.7	5.0	110	90	26	110	66
NAVASOTA — STONEVILLE 825						90 PERCENT							
SLM 41	34		5.6	102	32	1922	5.6	4.0	110	90	28	134	53
SLM 41	34		6.4	98	33	1903	5.9	4.5	110	80	32	156	58
NORTHWEST TEXAS / BOVINA — TAMCOT CAMD E						80 PERCENT							
SLM LT SP 42 [1]	30		7.9	95	30	1795	7.0	6.0	90	70	12	18	37
LM SP 53 [1]	31		8.1	89	29 [2]	1704	7.1	6.5	100	70	2	24	37
FLOMOT — TAMCOT CAMD E						70 PERCENT							
SLM LT SP 42	32		8.1	101	36	2011	6.7	5.4	100	70	18	78	57
SLM LT SP 42	32		8.3	99	32	1889	7.2	5.2	100	90	20	34	49
LORENZO — PAYMASTER 303						80 PERCENT							
SLM LT SP 42	32		7.7	103	36	2033	7.2	5.4	100	60	14	40	60
SLM LT SP 42	32		8.0	98	31	1853	7.2	5.1	100	80	2	50	49
LORENZO — PAYMASTER 404						100 PERCENT							
SLM LT SP 42	31		8.1	103	33	1958	6.6	4.9	100	70	28	132	51
SLM LT SP 42	31		8.8	100	31	1875	6.6	4.9	100	70	14	30	50

[1] REDUCED FROM 43 BECAUSE OF BARK.
[2] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 36s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.

TABLE 6.-- CONTINUED

-50-

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
GRADE : STAPLE			HVI UHM	M/UHM UNIF.		HVI	STEL.		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	G/TEX	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
NORTHWEST TEXAS PLAINS														
DUNN 119							85 PERCENT							
SLM LT SP 42		33	1.01	79	36	24	24	5.2	2.1	3.8	76.5	10.2	22-1	0.33
SLM LT SP 42		33	1.00	79	37	26	22	6.6	1.8	3.4	76.3	11.1	12-2	0.46
POST														
COKER 5110							75 PERCENT							
M	31	32	1.00	80	41	27	24	6.2	2.2	3.4	79.5	8.6	21-1	0.58
SLM SP	43	34	1.04	80	36	26	22	6.6	2.4	3.8	72.0	11.0	33-1	0.54
WEST														
ARIZONA BOWIE														
STONEVILLE 213							76 PERCENT							
M	31	35	1.08	80	40	24	22	7.4	1.2	1.8	80.5	9.4	11-2	0.58
SLM	41	34	1.09	80	42	23	21	6.5	1.3	2.6	78.0	9.1	21-4	0.58
BUCKEYE														
DELTAPINE 120							100 PERCENT							
M	31	35	1.06	82	52	27	25	5.9	1.0	2.2	79.0	9.2	21-3	0.22
SLM	41	35	1.06	82	45	27	24	7.3	1.1	2.4	74.2	8.2	41-3	0.17
CASA GRANDE														
DELTAPINE 61							91 PERCENT							
SLM	41	36	1.11	81	46	23	23	5.4	1.8	3.0	77.0	9.2	21-4	0.31
SLM	41	36	1.13	82	48	25	24	5.7	1.5	2.5	78.0	8.7	21-2	0.22
CASA GRANDE														
DELTAPINE 62							95 PERCENT							
SLM	41	36	1.16	79	41	26	25	5.7	2.0	3.4	79.0	8.2	21-2	0.21
SLM	41	36	1.17	80	41	28	25	5.6	1.8	3.0	78.7	7.0	31-2	0.20
ELOY														
DELTAPINE 41							100 PERCENT							
SLM	41	35	1.12	81	45	25	24	6.2	2.0	3.1	77.7	9.0	21-4	0.43
LM	51	35	1.14	80	37	28	24	6.0	3.6	4.6	74.2	8.0	41-1	0.35

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION				PICKER & CARD WASTE	YARN PROPERTIES									
					STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
		GRADE	: STAPLE		22s	50s	:BR. FACTOR	22s	50s	22s	50s	22s	50s	
NAME	CODE		32ND IN.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
NORTHWEST TEXAS PLAINS														
DUNN 119							85 PERCENT							
	SLM LT SP 42	33		6.6	108	34	2038	6.4	4.6	90	60	30	150	50
	SLM LT SP 42	33		7.7	100	31	1875	6.5	4.8	100	60	22	58	48
POST														
COKER 5110							75 PERCENT							
	M 31	32		6.9 1/	101	35	1986	6.4	4.7	100	80	18	80	53
	SLM SP 43	34		7.8	107	35	2052	7.0	5.2	100	60	50	242	58
WEST														

ARIZONA BOWIE														
STONEVILLE 213							76 PERCENT							
	M 31	35		5.7	89	30	1729	7.4	5.3	90	60	48	164	47
	SLM 41	34		6.0	92	29	1737	7.0	5.2	110	70	34	112	50
BUCKEYE														
DELTAPINE 120							100 PERCENT							
	M 31	35		6.4	110	37	2135	6.3	4.7	110	80	22	46	58
	SLM 41	35		6.1	110	38	2160	6.8	5.1	110	80	12	56	60
CASA GRANDE														
DELTAPINE 61							91 PERCENT							
	SLM 41	36		6.4	109	40	2199	6.3	4.5	100	60	18	160	64
	SLM 41	36		6.2	102	36	2022	6.2	4.6	100	70	34	116	63
CASA GRANDE														
DELTAPINE 62							95 PERCENT							
	SLM 41	36		6.7	101	33	1936	6.2	4.4	100	70	28	108	59
	SLM 41	36		6.9	105	33	1980	6.5	4.5	110	80	16	142	53
ELOY														
DELTAPINE 41							100 PERCENT							
	SLM 41	35		6.8	110	37	2135	6.4	4.4	100	80	34	286	60
	LM 51	35		7.4	109	37	2124	6.3	4.9	100	70	42	98	62

1 COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.-- CONTINUED

NAME	GRADE CODE	STAPLE 32ND IN.	FIBER LENGTH HVI UHM IN.	M/UHM UNIF. PCT.	MICRONAIRE RDG.	1/8" GAGE STRENGTH HVI G/TEX	STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	SHIRLEY ANALYZER NONLINT VISIBLE WASTE PCT.	TOTAL WASTE PCT.	COLOR OF RAW STOCK Rd PCT.	+b UNITS	COLOR CODE NO.	SUGAR CONTENT PCT.
ARIZONA														
MARANA														
DELTAPINE 55							98 PERCENT							
SLM	41	36	1.16	81	41	23	24	5.8	2.4	3.8	78.2	9.0	21-2	0.48
SLM	41	35	1.09	77	26	24	22	5.9	1.6	3.2	77.0	6.8	41-1	0.26
ROLL														
DELTAPINE 62							70 PERCENT							
M	31	35	1.07	79	46	25	23	6.1	1.6	2.5	79.3	8.6	21-2	0.28
SLM	41	35	1.14	80	44	28	24	6.1	1.7	3.1	79.7	8.2	21-2	0.25
STANFIELD														
DELTAPINE 62							72 PERCENT							
M	31	35	1.12	80	51	26	24	5.5	0.8	1.2	80.3	8.6	21-1	0.29
SLM	41	35	1.13	81	48	25	23	6.0	1.1	2.3	78.0	8.4	31-1	0.19
CALIFORNIA														
BAKERSFIELD														
ACALA SJ-2							98 PERCENT							
SLM	41	36	1.12	81	40	29	27	5.7	2.7	3.6	77.0	8.8	31-3	0.33
SLM PLUS	40	36	1.14	82	41	26	26	5.8	1.3	2.4	79.2	8.6	21-2	0.32
CALIPATRIA														
DELTAPINE 70							90 PERCENT							
SLM	41	35	1.11	79	38	25	23	5.5	1.2	2.2	80.0	8.2	21-2	0.22
SLM	41	35	1.05	81	44	24	23	4.4	1.6	2.6	75.5	8.0	31-2	0.24
CARUTHERS														
ACALA SJ-2							100 PERCENT							
M	31	36	1.13	83	44	28	27	5.6	1.3	2.0	77.2	9.2	21-4	0.38
SLM	41	36	1.12	83	49	29	26	5.6	1.3	2.2	75.0	8.3	41-3	0.26
CORCORAN														
ACALA SJ-2							100 PERCENT							
M	31	36	1.11	81	43	30	26	5.7	1.0	2.1	78.0	9.2	21-4	0.31
SLM	41	36	1.11	81	41	27	26	5.8	1.4	2.6	76.5	8.2	31-2	0.32
FIREBAUGH														
ACALA SJ-2							98 PERCENT							
M	31	36	1.14	81	43	31	27	5.9	1.4	2.4	79.5	8.9	21-1	0.33
SLM	41	36	1.11	81	42	29	28	6.2	2.0	3.1	77.5	8.4	31-1	0.33

TABLE 6.--CONTINUED

NAME	GRADE CODE	STAPLE 32ND IN.	PICKER & CARD WASTE PCT.	STRENGTH 22s LBS.	STRENGTH 50s LBS.	BR. FACTOR AVG. NO.	ELONGATION 22s PCT.	ELONGATION 50s PCT.	APPEARANCE 22s INDEX	APPEARANCE 50s INDEX	NEPS 22s NO.	NEPS 50s NO.	SPINNING POTENTIAL NO.
ARIZONA MARANA			DELTAPINE 55			98 PERCENT							
SLM	41	36	7.3	106	37	2091	6.7	5.3	100	70	18	140	65
SLM	41	35	6.5	110	38	2160	7.5	5.7	110	70	10	82	67
ROLL			DELTAPINE 62			70 PERCENT							
M	31	35	7.1	90	27	1665	5.3	3.7	110	80	74	354	43
SLM	41	35	7.0	90	29	1715	5.4	3.9	90	70	52	112	53
STANFIELD			DELTAPINE 62			72 PERCENT							
M	31	35	5.7	99	33	1914	5.8	4.2	100	70	26	90	56
SLM	41	35	6.7	94	28	1734	6.0	4.4	100	70	24	126	50
CALIFORNIA BAKERSFIELD			ACALA SJ-2			98 PERCENT							
SLM	41	36	5.9	128	47	2583	6.7	5.3	100	70	36	62	81
SLM PLUS	40	36	5.7	124	45	2489	6.4	5.1	120	80	22	58	79
CALIPATRIA			DELTAPINE 70			90 PERCENT							
SLM	41	35	5.6	104	35	2019	6.2	4.6	90	60	44	96	60
SLM	41	35	6.4	102	33	1947	6.0	4.7	100	80	10	42	55
CARUTHERS			ACALA SJ-2			100 PERCENT							
M	31	36	6.7	127	46	2547	6.4	5.0	100	70	44	116	75
SLM	41	36	5.5	123	45	2478	6.4	4.8	120	80	28	114	76
CORCORAN			ACALA SJ-2			100 PERCENT							
M	31	36	6.0	119	42	2359	6.3	5.1	100	70	40	186	69
SLM	41	36	6.1	122	44	2442	6.4	5.1	120	100	40	82	76
FIREBAUGH			ACALA SJ-2			98 PERCENT							
M	31	36	6.4	127	44	2497	6.4	5.0	100	70	38	94	74
SLM	41	36	6.1	124	45	2489	6.6	5.1	100	70	32	76	76

TABLE 6.-- CONTINUED

NAME	GRADE CODE	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	MICRONAIRE RDG.	HVI G/TEX	STEL. G/TEX	STEL. 1/8" ELONGATION PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	SUGAR CONTENT PCT.
CALIFORNIA FIREBAUGH			ACALA SJ-5			100 PERCENT 1/								
M	31	36	1.12	82	40	29	28	5.2	1.3	2.4	80.0	8.8	21-1	0.38
SLM	41	36	1.10	83	45	31	27	6.5	1.4	2.5	76.3	7.9	31-2	0.23
HELM			ACALA SJ-2			100 PERCENT								
M	31	36	1.09	82	45	31	29	5.9	1.0	1.8	78.3	9.3	21-3	0.31
SLM	41	37	1.17	83	44	30	28	6.2	1.5	2.6	77.0	8.8	31-3	0.31
LOST HILLS			ACALA SJ-2			98 PERCENT								
SLM PLUS	40	36	1.12	81	37	30	27	5.8	1.6	3.0	78.2	9.2	21-3	0.37
SLM	41	36	1.16	83	44	28	26	6.1	1.5	2.3	77.5	8.2	31-1	0.32
STRATHMORE			ACALA SJ-5			100 PERCENT								
SLM	41	36	1.12	81	39	31	29	5.4	1.3	2.2	77.0	8.7	31-3	0.28
SLM	41	36	1.14	82	43	27	27	5.5	1.2	2.5	77.0	8.2	31-2	0.26
THERMAL			DELTAPINE 61			100 PERCENT								
M	31	35	1.12	81	47	26	26	5.8	1.0	2.1	79.0	8.4	21-2	0.26
SLM	41	35	1.08	80	42	26	24	5.8	1.6	2.5	77.0	8.5	31-1	0.24
VISALIA			ACALA SJ-5			98 PERCENT								
M	31	36	1.13	82	42	28	26	5.6	0.8	1.5	78.2	9.0	21-4	0.30
SLM	41	36	1.15	82	45	25	25	5.5	1.4	2.6	77.0	9.1	21-4	0.25
WESTMORLAND			DELTAPINE 61			100 PERCENT								
SLM	41	35	1.08	79	45	24	24	5.6	1.0	2.2	77.3	8.6	31-1	0.25
SLM	41	35	1.09	79	39	24	23	5.0	1.3	2.6	78.3	8.1	31-1	0.18

1/ 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION				YARN PROPERTIES									
				STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
	GRADE	STAPLE	PICKER & CARD WASTE	22s	50s	:BR. FACTOR	22s	50s	22s	50s	22s	50s	
NAME	CODE	32ND IN.	PCT.	LBS.	LBS.	AVG. NO.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.
GALIFORNIA FIREBAUGH			ACALA SJ-5			100 PERCENT [1]							
M	31	36	5.8	140	52	2840	6.4	5.2	100	70	26	126	88
SLM	41	36	6.1 [2]	132	48	2652	6.5	5.2	100	90	46	120	75
HELM			ACALA SJ-2			100 PERCENT							
M	31	36	5.4	142	54	2912	6.8	5.4	100	70	32	126	93
SLM	41	37	5.9	130	46	2580	6.8	5.3	120	90	20	78	86
LOST HILLS			ACALA SJ-2			98 PERCENT							
SLM PLUS	40	36	7.0	123	44	2453	6.4	4.8	90	70	56	124	73
SLM	41	36	6.3	125	45	2500	6.5	5.3	110	70	26	96	77
STRATHMORE			ACALA SJ-5			100 PERCENT							
SLM	41	36	6.7	133	51	2738	6.6	4.6	100	70	46	142	83
SLM	41	36	6.1	133	50	2713	6.7	5.0	100	70	52	222	79
THERMAL			DELTAPINE 61			100 PERCENT							
M	31	35	6.0	108	38	2138	6.0	4.7	100	70	30	244	64
SLM	41	35	5.9	105	35	2030	6.1	4.9	100	80	26	84	61
VISALIA			ACALA SJ-5			98 PERCENT							
M	31	36	5.4	131	48	2641	6.3	4.9	90	70	96	328	84
SLM	41	36	5.6	125	47	2550	6.4	5.0	100	70	26	68	82
WESTMORLAND			DELTAPINE 61			100 PERCENT							
SLM	41	35	6.4	99	33	1914	6.0	4.4	100	70	18	36	58
SLM	41	35	6.9	95	30	1795	6.0	4.3	100	80	36	314	51

[1] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
[2] COTTON STUCK TO PROCESSING ROLLS.

TABLE 7.--COTTON: AMERICAN UPLAND LONG STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			SUGAR CONTENT
NAME / GRADE	CODE	STAPLE 32ND IN.	HVI UHM IN.	M/UHM UNIF. PCT.	RDG.	HVI G/TEX	STEL. G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
SOUTHEAST														
GEORGIA MADISON COKER 310						100 PERCENT								
SLM LT SP	42	36	1.19	81	44	26	24	5.8	2.4	3.5	68.5	9.2	42-2	0.15
SLM LT SP	42	36	1.16	81	45	27	25	6.0	2.3	3.3	70.0	9.2	42-2	0.15
NORTH CAROLINA DUNN COKER 310						80 PERCENT								
SLM	41	36	1.13	81	40	27	23	5.8	1.5	2.6	72.7	8.8	41-3	0.19
SLM LT SP	42	35	1.12	81	39	23	22	5.5	1.6	2.8	73.0	8.8	41-3	0.19
SOUTH CAROLINA BENNETTSVILLE COKER 310						70 PERCENT								
SLM	41	36	1.17	81	43	26	24	5.4	1.6	2.8	76.3	8.7	31-3	0.19
LM	51	34	1.06	79	34	24	23	6.1	2.4	3.9	75.3	8.2	31-2	0.22
WEST														
CALIFORNIA HURON ACALA SJ-2						100 PERCENT								
M	31	37	1.15	81	34	29	28	5.8	1.0	2.0	80.5	9.5	11-3	0.32
M	31	37	1.13	82	36	26	24	6.3	0.7	1.6	79.5	9.5	11-4	0.27
NEW MEXICO MESILLA PARK ACALA 1517-75						90 PERCENT								
SLM	41	37	1.17	82	39	26	26	6.5	3.0	4.4	77.5	7.9	31-2	0.42
SLM	41	37	1.17	82	38	26	26	6.5	2.3	4.2	77.5	8.8	31-3	0.61

TABLE 7.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			PICKER & CARD WASTE	YARN PROPERTIES									SPINNING POTENTIAL
				STRENGTH			ELONGATION		APPEARANCE		NEPS		
NAME	GRADE CODE	STAPLE 32ND IN.	PCT.	22s LBS.	50s LBS.	BR. FACTOR AVG. NO.	22s PCT.	50s PCT.	22s INDEX	50s INDEX	22s NO.	50s NO.	NO.
SOUTHEAST													
GEORGIA MADISON	COKER 310					100 PERCENT							
	SLM LT SP 42	36	7.6	111	40	2221	6.5	4.7	120	80	20	46	74
	SLM LT SP 42	36	7.8	112	42	2282	6.5	5.4	100	70	12	78	72
NORTH CAROLINA DUNN	COKER 310					80 PERCENT							
	SLM 41	36	7.7	102	33	1947	6.3	4.8	90	70	26	494	59
	SLM LT SP 42	35	8.5	98	33	1903	6.5	4.9	100	60	26	226	59
SOUTH CAROLINA BENNETTSVILLE	COKER 310					70 PERCENT							
	SLM 41	36	7.4	102	35	1997	5.9	5.0	100	70	24	120	58
	LM 51	34	9.2	96	32	1856	6.3	4.0	70	60	34	124	52
WEST													
CALIFORNIA HURON	ACALA SJ-2					100 PERCENT							
	M 31	37	6.2	130	49	2655	6.8	5.3	110	70	22	92	79
	M 31	37	6.9	121	45	2456	6.3	5.0	100	80	14	80	65
NEW MEXICO MESILLA PARK	ACALA 1517-75					90 PERCENT							
	SLM 41	37	8.9 1/	129	46	2569	6.9	5.4	100	70	40	140	86
	SLM 41	37	5.4 1/	130	47	2605	6.9	5.4	80	60	30	180	97

1 COTTON STUCK TO PROCESSING ROLLS.

TABLE 7A.--COTTON: AMERICAN UPLAND LONG STAPLE COMBED YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

PRODUCTION AREA AND CLASSIFICATION			COMBER	YARN SKEIN STRENGTH				YARN ELONGATION		YARN APPEARANCE			YARN NEPS	
GRADE NAME	CODE	STAPLE 32ND IN.	WASTE PCT.	22s LBS.	50s LBS.	AVERAGE BREAK FACTOR NO.		22s PCT.	50s PCT.	22s INDEX	50s INDEX	AVERAGE INDEX	22s NO.	50s NO.
SOUTHEAST														
GEORGIA MADISON			COKER 310				100 PERCENT							
SLM LT SP	42	36	16.6	128	45	2533		7.0	5.4	120	110	115	20	64
SLM LT SP	42	36	16.4	130	46	2580		6.6	5.5	120	110	115	18	58
NORTH CAROLINA DUNN			COKER 310				80 PERCENT							
SLM	41	36	20.0	121	42	2381		6.5	5.1	110	90	100	22	114
SLM LT SP	42	35	18.7	122	42	2392		7.2	5.5	120	90	105	26	130
SOUTH CAROLINA BENNETTSVILLE			COKER 310				70 PERCENT							
SLM	41	36	19.5	125	45	2500		6.7	5.3	120	100	110	28	32
LM	51	34	19.9	120	42	2370		6.8	5.4	120	70	95	32	158
WEST														
CALIFORNIA HURON			ACALA SJ-2				100 PERCENT							
M	31	37	14.3	147	54	2967		6.8	5.7	120	100	110	30	104
M	31	37	15.8	142	54	2912		6.8	5.3	120	100	110	32	42
NEW MEXICO MESILLA PARK			ACALA 1517-75				90 PERCENT							
SLM 1/	41	37	16.8	146	57	3031		7.0	5.7	120	90	105	32	122
SLM	41	37	-	-	-	-		-	-	-	-	-	-	-

1 INSUFFICIENT COTTON FOR COMBED YARN TESTS.

TABLE 8.--COTTON: AMERICAN PIMA EXTRA LONG STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1982.

| PRODUCTION AREA AND CLASSIFICATION | | FIBER LENGTH | | MICRO-NAIRE | 1/8" CAGE FIBER STRENGTH | 1/8" ELON-GATION | SHIRLEY ANALYZER NONLINT | | COLOR OF RAW STOCK | | | SUGAR CONTENT |
NAME / GRADE : STAPLE	32ND IN.	2.5% SPAN IN.	50/2.5 UNIF. PCT.	RDG.	G/TEX	PCT.	VISIBLE WASTE PCT.	TOTAL WASTE PCT.	Rd PCT.	+b UNITS	COLOR CODE NO.	PCT.
WEST												
ARIZONA												
CASA GRANDE		PIMA S-5			98 PERCENT							
3	46	1.33	46	39	33	6.6	1.3	2.4	71.3	11.9	-	0.21
3	46	1.37	45	40	33	6.7	1.7	3.2	71.7	11.6	-	0.20
SAFFORD		PIMA S-5			90 PERCENT							
4	46	1.35	44	39	35	7.1	1.7	2.8	67.5	12.9	-	0.23
4	46	1.30	46	39	36	7.1	1.6	2.5	66.7	12.8	-	0.22
WENDEN		PIMA S-5			86 PERCENT							
3	46	1.34	45	35	34	7.4	0.6	2.3	70.7	11.7	-	0.21
4	46	1.34	46	38	33	7.9	1.5	3.1	71.7	11.3	-	0.21
NEW MEXICO												
LAS CRUCES		PIMA S-5			100 PERCENT							
3	46	1.32	47	42	36	7.7	1.7	2.9	68.0	11.9	-	0.22
4	46	1.32	46	38	33	9.0	2.7	3.5	70.5	11.4	-	0.27
WEST TEXAS												
ANTHONY		PIMA S-5			100 PERCENT							
4	46	1.36	44	33	32	9.2	1.5	3.0	69.2	11.6	-	0.26
4	46	1.31	46	42	35	7.0	1.3	2.2	66.7	12.8	-	0.26
EL PASO		PIMA S-5			95 PERCENT							
4	46	1.30	43	36	34	7.4	1.3	2.2	68.7	12.1	-	0.23
4	46	1.28	47	42	35	7.4	0.9	1.7	65.8	13.0	-	0.21

TABLE 8.--CONTINUED

NAME	GRADE CODE	STAPLE 32ND IN.	PICKER & CARD WASTE PCT.	COMBER WASTE PCT.	STRENGTH 50s LBS.	STRENGTH 80s LBS.	STRENGTH :BR. FACTOR AVG. NO.		ELONGATION 50s PCT.	ELONGATION 80s PCT.	APPEARANCE 50s INDEX	APPEARANCE 80s INDEX	NEPS 50s NO.	NEPS 80s NO.
WEST														
ARIZONA														
CASA GRANDE			PIMA S-5											
	3	46	6.6	15.9	66	34	98 PERCENT	3010	5.6	4.9	120	100	24	80
	3	46	7.3	15.0	66	35		3050	5.3	4.9	110	100	48	94
SAFFORD			PIMA S-5											
	4	46	7.1 1/	14.3	64	33	90 PERCENT	2920	5.7	5.2	130	120	36	74
	4	46	6.7 1/	16.8	65	33		2945	5.8	5.1	130	120	42	70
WENDEN			PIMA S-5											
	3	46	6.8	16.8	67	35	86 PERCENT	3075	5.5	4.8	120	100	52	108
	4	46	6.8	16.1	65	36		3065	5.8	5.3	110	100	62	88
NEW MEXICO														
LAS CRUCES			PIMA S-5											
	3	46	6.4	13.3	65	34	100 PERCENT	2985	5.9	5.1	130	120	38	96
	4	46	7.2	14.6	67	35		3075	5.8	5.5	130	100	42	100
WEST TEXAS														
ANTHONY			PIMA S-5											
	4	46	7.1 1/	14.3	66	34	100 PERCENT	3010	5.9	5.6	130	100	42	126
	4	46	7.2	14.9	68	35		3100	5.9	5.3	130	110	86	98
EL PASO			PIMA S-5											
	4	46	6.6	15.3	65	35	95 PERCENT	3025	5.2	5.2	120	100	76	126
	4	46	6.3	14.8	64	33		2920	5.8	5.3	130	120	20	110

1 COTTON STUCK TO PROCESSING ROLLS.

TABLE 9.--COTTON: MEANS AND STANDARD DEVIATIONS OF TEST MEASUREMENTS PERFORMED ON 184 SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

TEST ITEM	25 SHORT STAPLE SAMPLES		137 MEDIUM STAPLE SAMPLES		10 LONG STAPLE SAMPLES		12 EXTRA LONG STAPLE SAMPLES	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
FIBER PROPERTIES:								
CLASSIFICATION:								
GRADE -------- INDEX	92.5	4.4	92.1	4.6	92.8	4.9	-	-
STAPLE ------- 32ND IN.	31.0	0.7	34.9	1.4	36.1	1.0	46.0	0.0
FIBER LENGTH:								
UPPER HALF MEAN ------ IN.	0.958	0.037	1.090	0.059	1.145	0.037	-	-
MEAN/UHM UNIF. ------ PCT.	80.0	1.1	81.0	1.0	81.1	0.9	-	-
2.5% SPAN ------- IN.	-	-	-	-	-	-	1.327	0.027
50/2.5 UNIF. ------- PCT.	-	-	-	-	-	-	45.4	1.2
MICRONAIRE ---------- RDG.	38.9	3.7	43.1	4.2	39.2	3.9	38.6	2.8
FIBER STRENGTH:								
HVI 1/8" CAGE ------- G/TEX	23.2	1.4	25.3	2.0	26.0	1.6	-	-
STELOMETER 1/8" CAGE - C/TEX	22.2	1.3	23.6	1.7	24.5	1.8	34.1	1.3
ELONGATION (1/8") ----- PCT.	6.36	0.44	5.96	0.60	5.97	0.38	7.54	0.82
SHIRLEY ANALYZER:								
VISIBLE WASTE -------- PCT.	2.12	0.67	1.90	0.65	1.88	0.72	1.48	0.51
TOTAL WASTE -------- PCT.	3.48	0.72	3.01	0.79	3.11	0.92	2.65	0.52
COLOR OF RAW STOCK								
GRAYNESS (Rd) ------- PCT.	76.62	1.94	75.34	2.75	75.08	3.96	69.04	2.11
YELLOWNESS (+B) ------ UNITS	10.00	0.52	8.70	0.77	8.86	0.52	12.08	0.62
SUGAR CONTENT -------- PCT.	0.496	0.089	0.312	0.159	0.271	0.146	0.228	0.023

TABLE 9.--CONTINUED

TEST ITEM		25 SHORT STAPLE SAMPLES		137 MEDIUM STAPLE SAMPLES		10 LONG STAPLE SAMPLES		12 EXTRA LONG STAPLE SAMPLES	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
MANUFACTURING WASTE:									
TOTAL WASTE	PCT.	6.40	0.66	6.58	0.84	7.70	0.95	6.84	0.33
COMBER WASTE	PCT.	-	-	-	-	17.56	2.03	15.18	1.06
CARDED YARN DATA:									
YARN SKEIN STRENGTH:									
8s (74 TEX)	LBS.	314.2	15.7	105.6	10.5	113.1	13.6		
22s (27 TEX)	LBS.	98.3	5.9	36.3	5.2	40.2	6.5		
50s (12 TEX)	LBS.	-	-	-	-	-	-		
YARN ELONGATION:									
8s (74 TEX)	PCT.	7.90	0.45	6.42	0.45	6.49	0.31		
22s (27 TEX)	PCT.	7.25	0.37	4.86	0.43	4.99	0.44		
50s (12 TEX)	PCT.	-	-	-	-	-	-		
YARN APPEARANCE:									
8s (74 TEX)	INDEX	105.2	8.7	103.6	7.7	97.0	14.2		
22s (27 TEX)	INDEX	99.6	9.8	76.7	8.5	69.0	7.4		
50s (12 TEX)	INDEX	-	-	-	-	-	-		
YARN NEPS:									
8s (74 TEX)	NO.	4.0	3.0	28.0	14.9	24.8	8.5		
22s (27 TEX)	NO.	28.3	28.9	130.4	78.5	158.0	129.2		
50s (12 TEX)	NO.	-	-	-	-	-	-		
SPINNING POTENTIAL	NO.	50.7	10.4	60.8	10.0	70.1	14.2		

TABLE 9.--CONTINUED

TEST ITEM	25 SHORT STAPLE SAMPLES		137 MEDIUM STAPLE SAMPLES		9 LONG STAPLE SAMPLES		12 EXTRA LONG STAPLE SAMPLES	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
COMBED YARN DATA:								
YARN SKEIN STRENGTH:								
22s (27 TEX) --------- LBS.					131.2	10.9	-	-
50s (12 TEX) --------- LBS.					47.4	5.9	65.7	1.2
80s (7.4 TEX) -------- LBS.					-	-	34.3	1.0
YARN ELONGATION:								
22s (27 TEX) --------- PCT.					6.82	0.22	-	-
50s (12 TEX) --------- PCT.					5.43	0.19	5.76	0.21
80s (7.4 TEX) -------- PCT.					-	-	5.18	0.24
YARN APPEARANCE:								
22s (27 TEX) --------- INDEX					118.9	3.3	-	-
50s (12 TEX) --------- INDEX					95.6	12.4	124.2	7.9
80s (7.4 TEX) -------- INDEX					-	-	107.5	9.7
YARN NEPS:								
22s (27 TEX) --------- NO.					26.7	5.5	-	-
50s (12 TEX) --------- NO.					91.6	43.8	47.3	19.4
80s (7.4 TEX) -------- NO.					-	-	97.5	18.1

NOTE: INSUFFICIENT COTTON FOR COMBED YARN TESTS ON ONE OF THE 10 LONG STAPLE SPINNING LOTS.

TABLE 10.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS FROM 25 SHORT STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

SIMPLE CORRELATION COEFFICIENTS (r's)

TEST ITEM	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	1/8" CACE STRENGTH		STEL. 1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK		SUGAR CONTENT
	GRADE	STAPLE	HVI UHM	M/UHM UNIF.		HVI	STEL.		VISIBLE WASTE	TOTAL WASTE	Rd	+b	
CLASSIFICATION:													
GRADE ----- INDEX	+1.00	-.25	-.14	-.06	+.30	-.17	-.15	+.12	-.66	-.62	+.42	+.21	-.03
STAPLE ----- 32ND IN.	-.25	+1.00	+.63	+.51	+.09	+.51	+.30	-.11	+.19	+.15	-.26	-.21	-.35
FIBER LENGTH:													
UPPER HALF MEAN ---- IN.	-.14	+.63	+1.00	+.60	+.39	+.40	+.68	-.28	+.29	+.08	-.01	-.32	-.47
MEAN/UHM UNIF. --- PCT.	-.06	+.51	+.60	+1.00	+.57	+.37	+.41	-.05	+.30	+.09	-.10	-.40	-.36
MICRONAIRE ---- RDG.	+.30	+.09	+.39	+.57	+1.00	-.03	+.35	-.11	-.07	-.29	+.01	+.04	-.55
FIBER STRENGTH:													
HVI 1/8" CACE --- G/TEX	-.17	+.51	+.40	+.37	-.03	+1.00	+.42	+.33	+.18	+.18	-.42	-.27	+.06
STEL. 1/8" CACE - C/TEX	-.15	+.30	+.68	+.41	+.35	+.42	+1.00	-.46	+.50	+.28	-.09	-.22	-.21
STEL. ELONGATION -- PCT.	+.12	-.11	-.28	-.05	-.11	+.33	-.46	+1.00	-.50	-.42	-.35	+.05	+.32
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.66	+.19	+.29	+.30	-.07	+.18	+.50	-.50	+1.00	+.90	-.14	-.33	-.04
TOTAL WASTE ------ PCT.	-.62	+.15	+.08	+.09	-.29	+.18	+.28	-.42	+.90	+1.00	-.16	-.22	+.13
COLOR OF RAW STOCK:													
GRAYNESS (Rd) ---- PCT.	+.42	-.26	-.01	-.10	+.01	-.42	-.09	-.35	-.14	-.16	+1.00	-.27	-.09
YELLOWNESS (+B) -- UNITS	+.21	-.21	-.32	-.40	+.04	-.27	-.22	+.05	-.33	-.22	-.27	+1.00	+.01
SUGAR CONTENT ------ PCT.	-.03	-.35	-.47	-.36	-.55	+.06	-.21	+.32	-.04	+.13	-.09	+.01	+1.00
PICKER AND CARD WASTE -------- PCT.	-.56	-.11	-.10	+.10	-.34	-.03	+.08	-.13	+.61	+.68	-.28	+.03	+.33
YARN STRENGTH:													
8s (74 TEX) ------- LBS.	-.05	+.47	+.61	+.68	+.30	+.27	+.50	-.26	+.39	+.19	+.12	-.35	-.21
22s (27 TEX) ------ LBS.	-.12	+.46	+.59	+.43	+.09	+.29	+.61	-.54	+.49	+.40	+.23	-.20	-.12
AVG. BREAK FACTOR -- NO.	-.09	+.49	+.63	+.58	+.20	+.29	+.59	-.42	+.46	+.31	+.19	-.29	-.17
YARN ELONGATION:													
8s (74 TEX) ------- PCT.	-.25	+.41	+.07	-.01	-.08	+.27	-.20	+.31	-.14	-.13	-.49	+.06	-.09
22s (27 TEX) ------ PCT.	-.23	+.35	-.01	-.05	-.20	+.31	-.20	+.25	-.14	-.05	-.40	+.20	-.03
YARN APPEARANCE:													
8s (74 TEX) ------ INDEX	+.20	-.36	+.10	-.02	+.40	-.27	+.30	-.22	+.01	-.11	+.19	+.17	-.11
22s (27 TEX) ----- INDEX	+.19	-.11	+.17	+.35	+.56	+.18	+.30	+.09	+.09	-.06	-.04	+.05	-.20
YARN NEPS:													
8s (74 TEX) ------ NO.	+.40	-.04	-.13	+.03	+.34	-.35	+.02	-.26	-.03	-.08	+.29	+.36	-.02
22s (27 TEX) ----- NO.	-.05	+.25	+.32	+.32	+.10	+.17	+.29	-.45	+.24	+.20	+.32	-.13	-.36
SPINNING POTENTIAL --- NO.	-.02	+.64	+.72	+.40	+.08	+.38	+.52	-.35	+.34	+.27	+.16	-.36	-.24

TABLE 10.--CONTINUED

TEST ITEM	PICKER & CARD WASTE	YARN PROPERTIES									
		STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
		8s	22s	BR. FACTOR	8s	22s	8s	22s	8s	22s	
		SIMPLE CORRELATION COEFFICIENTS (r's)									
CLASSIFICATION:											
GRADE --------- INDEX	-.56	-.05	-.12	-.09	-.25	-.23	+.20	+.19	+.40	-.05	-.02
STAPLE -------- 32ND IN.	-.11	+.47	+.46	+.49	+.41	+.35	-.36	-.11	-.04	+.25	+.64
FIBER LENGTH:											
UPPER HALF MEAN ---- IN.	-.10	+.61	+.59	+.63	+.07	-.01	+.10	+.17	-.13	+.32	+.72
MEAN/UHM UNIF. ---- PCT.	+.10	+.68	+.43	+.58	-.01	-.05	-.02	+.35	+.03	+.32	+.40
MICRONAIRE ----------- RDG.	-.34	+.30	+.09	+.20	-.08	-.20	+.40	+.56	+.34	+.10	+.08
FIBER STRENGTH:											
HVI 1/8" GAGE ----- G/TEX	-.03	+.27	+.29	+.29	+.27	+.31	-.27	+.18	-.35	+.17	+.38
STEL. 1/8 " GAGE - G/TEX	+.08	+.50	+.61	+.59	-.20	-.20	+.30	+.30	+.02	+.29	+.52
STEL. ELONGATION -- PCT.	-.13	-.26	-.54	-.42	+.31	+.25	-.22	+.09	-.26	-.45	-.35
SHIRLEY ANALYZER:											
VISIBLE WASTE ------- PCT.	+.61	+.39	+.49	+.46	-.14	-.14	+.01	+.09	-.03	+.24	+.34
TOTAL WASTE --------- PCT.	+.68	+.19	+.40	+.31	-.13	-.05	-.11	-.06	-.08	+.20	+.27
COLOR OF RAW STOCK:											
GRAYNESS (Rd) ------- PCT.	-.28	+.12	+.23	+.19	-.49	-.40	+.19	-.04	+.29	+.32	+.16
YELLOWNESS (+B) -- UNITS	+.03	-.35	-.20	-.29	+.06	+.20	+.17	+.05	+.36	-.13	-.36
SUGAR CONTENT ------- PCT.	+.33	-.21	-.12	-.17	-.09	-.03	-.11	-.20	-.02	-.36	-.24
PICKER AND CARD WASTE -------- PCT.	+1.00	+.09	+.16	+.13	-.05	+.14	-.15	-.21	-.24	+.07	-.05
YARN STRENGTH:											
8s (74 TEX) ------- LBS.	+.09	+1.00	+.81	+.95	-.05	-.09	-.15	+.02	+.13	+.21	+.68
22s (27 TEX) ------- LBS.	+.16	+.81	+1.00	+.95	-.17	-.04	-.09	-.07	+.21	+.51	+.76
AVG. BREAK FACTOR -- NO.	+.13	+.95	+.95	+1.00	-.11	-.07	-.13	-.03	+.18	+.38	+.75
YARN ELONGATION:											
8s (74 TEX) ------- PCT.	-.05	-.05	-.17	-.11	+1.00	+.82	-.48	-.28	-.33	-.13	+.13
22s (27 TEX) ------- PCT.	+.14	-.09	-.04	-.07	+.82	+1.00	-.45	-.41	-.39	-.02	+.15
YARN APPEARANCE:											
8s (74 TEX) ------- INDEX	-.15	-.15	-.09	-.13	-.48	-.45	+1.00	+.71	+.19	-.16	-.17
22s (27 TEX) ------- INDEX	-.21	+.02	-.07	-.03	-.28	-.41	+.71	+1.00	+.26	+.04	-.15
YARN NEPS:											
8s (74 TEX) -------- NO.	-.24	+.13	+.21	+.18	-.33	-.39	+.19	+.26	+1.00	+.15	+.08
22s (27 TEX) -------- NO.	+.07	+.21	+.51	+.38	-.13	-.02	-.16	+.04	+.15	+1.00	+.32
SPINNING POTENTIAL --- NO.	-.05	+.68	+.76	+.75	+.13	+.15	-.17	-.15	+.08	+.32	+1.00

TABLE 11.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS FROM 137 MEDIUM STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

SIMPLE CORRELATION COEFFICIENTS (r's)

TEST ITEM	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" CAGE STRENGTH HVI	1/8" CAGE STRENGTH HVI:STEL	STEL. 1/8" ELONGATION	SHIRLEY ANALYZER NONLINT VISIBLE WASTE	SHIRLEY ANALYZER NONLINT TOTAL WASTE	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT
CLASSIFICATION:													
CRADE ------- INDEX	+1.00	+.17	+.10	+.14	+.21	+.26	+.36	-.12	-.71	-.72	+.71	-.16	+.09
STAPLE ------ 32ND IN.	+.17	+1.00	+.89	+.19	+.34	+.28	+.32	-.16	-.19	-.21	-.11	-.44	-.68
FIBER LENGTH:													
UPPER HALF MEAN ---- IN.	+.10	+.89	+1.00	+.18	+.31	+.25	+.27	-.11	-.11	-.15	-.11	-.52	-.64
MEAN/UHM UNIF. ---- PCT.	+.14	+.19	+.18	+1.00	+.49	+.21	+.30	-.09	-.13	-.23	-.00	-.09	+.09
MICRONAIRE ------- RDG.	+.21	+.34	+.31	+.49	+1.00	-.05	+.02	-.17	-.24	-.32	-.09	-.25	-.35
FIBER STRENGTH:													
HVI 1/8" GAGE ---- G/TEX	+.26	+.28	+.25	+.21	-.05	+1.00	+.79	-.02	-.10	-.15	+.27	-.00	+.01
STEL. 1/8" GAGE - C/TEX	+.36	+.32	+.27	+.30	+.02	+.79	+1.00	-.13	-.23	-.26	+.37	-.04	+.03
STEL. ELONGATION -- PCT.	-.12	-.16	-.11	-.09	-.17	-.02	-.13	+1.00	+.02	+.04	-.14	+.29	+.08
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.71	-.19	-.11	-.13	-.24	-.10	-.23	+.02	+1.00	+.95	-.46	+.14	+.07
TOTAL WASTE ------- PCT.	-.72	-.21	-.15	-.23	-.32	-.15	-.26	+.04	+.95	+1.00	-.46	+.17	+.01
COLOR OF RAW STOCK:													
CRAYNESS (Rd) ----- PCT.	+.71	-.11	-.11	-.00	-.09	+.27	+.37	-.14	-.46	-.46	+1.00	+.02	+.44
YELLOWNESS (+B) -- UNITS	-.16	-.44	-.52	-.09	-.25	-.00	-.04	+.29	+.14	+.17	+.02	+1.00	+.45
SUGAR CONTENT ------- PCT.	+.09	-.68	-.64	+.09	-.35	+.01	+.03	+.08	+.07	+.01	+.44	+.45	+1.00
PICKER AND CARD WASTE ---- PCT.	-.60	-.26	-.21	-.25	-.20	-.06	-.20	+.07	+.76	+.78	-.35	+.28	+.06
YARN STRENGTH:													
22s (27 TEX) ----- LBS.	+.26	+.40	+.34	+.39	-.11	+.69	+.81	-.13	-.17	-.20	+.22	-.04	-.01
50s (12 TEX) ----- LBS.	+.22	+.43	+.37	+.41	-.09	+.62	+.76	-.11	-.14	-.18	+.14	-.06	-.05
AVG. BREAK FACTOR -- NO.	+.24	+.42	+.36	+.40	-.10	+.66	+.79	-.12	-.16	-.19	+.18	-.05	-.03
YARN ELONGATION:													
22s (27 TEX) ----- PCT.	-.21	-.03	-.01	-.13	-.41	-.03	+.00	+.55	+.09	+.16	-.17	+.25	+.04
50s (12 TEX) ----- PCT.	-.17	-.01	-.03	+.04	-.37	+.13	+.09	+.45	+.11	+.14	-.18	+.27	+.05
YARN APPEARANCE:													
22s (27 TEX) ---- INDEX	+.12	-.07	-.07	+.35	+.14	-.01	+.05	-.06	-.15	-.23	+.02	-.19	+.24
50s (12 TEX) ---- INDEX	-.00	-.06	-.07	+.43	+.19	+.02	+.04	-.08	+.01	-.10	-.11	-.18	+.20
YARN NEPS:													
22s (27 TEX) ----- NO.	+.14	+.32	+.32	+.02	+.11	+.26	+.22	-.14	-.07	-.06	+.04	-.09	-.23
50s (12 TEX) ----- NO.	+.08	+.33	+.38	-.08	+.19	+.01	-.04	-.10	-.06	-.04	-.10	-.17	-.32
SPINNING POTENTIAL --- NO.	+.22	+.59	+.58	+.39	-.03	+.55	+.67	-.06	-.18	-.21	+.08	-.16	-.20

TABLE 11.--CONTINUED

TEST ITEM	PICKER & CARD WASTE	YARN PROPERTIES									
		STRENGTH			ELONGATION		APPEARANCE		NEPS		SPINNING POTENTIAL
		22s	50s	BR. FACTOR	22s	50s	22s	50s	22s	50s	
		SIMPLE CORRELATION COEFFICIENTS (r's)									
GLASSIFICATION:											
GRADE ---------- INDEX	-.60	+.26	+.22	+.24	-.21	-.17	+.12	-.00	+.14	+.08	+.22
STAPLE --------- 32ND IN.	-.26	+.40	+.43	+.42	-.03	-.01	-.07	-.06	+.32	+.33	+.59
FIBER LENGTH:											
UPPER HALF MEAN ---- IN.	-.21	+.34	+.37	+.36	-.01	-.03	-.07	-.07	+.32	+.38	+.58
MEAN/UHM UNIF. ---- PCT.	-.25	+.39	+.41	+.40	-.13	+.04	+.35	+.43	+.02	-.08	+.39
MICRONAIRE ------- RDG.	-.20	-.11	-.09	-.10	-.41	-.37	+.14	+.19	+.11	+.19	-.03
FIBER STRENGTH:											
IVI 1/8" CAGE ---- G/TEX	-.06	+.69	+.62	+.66	-.03	+.13	-.01	+.02	+.26	+.01	+.55
STEL. 1/8" CAGE - G/TEX	-.20	+.81	+.76	+.79	+.00	+.09	+.05	+.04	+.22	-.04	+.67
STEL. ELONGATION -- PCT.	+.07	-.13	-.11	-.12	+.55	+.45	-.06	-.08	-.14	-.10	-.06
SHIRLEY ANALYZER:											
VISIBLE WASTE ----- PCT.	+.76	-.17	-.14	-.16	+.09	+.11	-.15	+.01	-.07	-.06	-.18
TOTAL WASTE ------ PCT.	+.78	-.20	-.18	-.19	+.16	+.14	-.23	-.10	-.06	-.04	-.21
COLOR OF RAW STOCK:											
GRAYNESS (Rd) ----- PCT.	-.35	+.22	+.14	+.18	-.17	-.18	+.02	-.11	+.04	-.10	+.08
YELLOWNESS (+B) -- UNITS	+.28	-.04	-.06	-.05	+.25	+.27	-.19	-.18	-.09	-.17	-.16
SUGAR CONTENT ------- PCT.	+.06	-.01	-.05	-.03	+.04	+.05	+.24	+.20	-.23	-.32	-.20
PICKER AND CARD WASTE ----- PCT.	+1.00	-.24	-.26	-.25	+.03	+.03	-.21	-.17	+.02	-.03	-.31
YARN STRENGTH:											
22s (27 TEX) ------- LBS.	-.24	+1.00	+.96	+.99	+.17	+.28	+.05	+.04	+.21	-.03	+.88
50s (12 TEX) ------- LBS.	-.26	+.96	+1.00	+.99	+.20	+.30	+.07	+.03	+.16	-.04	+.91
AVG. BREAK FACTOR -- NO.	-.25	+.99	+.99	+1.00	+.19	+.29	+.06	+.03	+.19	-.04	+.91
YARN ELONGATION:											
22s (27 TEX) ------- PCT.	+.03	+.17	+.20	+.19	+1.00	+.60	-.15	-.18	-.16	-.11	+.22
50s (12 TEX) ------- PCT.	+.03	+.28	+.30	+.29	+.60	+1.00	-.07	-.05	-.22	-.12	+.29
YARN APPEARANCE:											
22s (27 TEX) ------- INDEX	-.21	+.05	+.07	+.06	-.15	-.07	+1.00	+.60	-.30	-.20	+.07
50s (12 TEX) ------- INDEX	-.17	+.04	+.03	+.03	-.18	-.05	+.60	+1.00	-.24	-.23	+.02
YARN NEPS:											
22s (27 TEX) ------- NO.	+.02	+.21	+.16	+.19	-.16	-.22	-.30	-.24	+1.00	+.57	+.21
50s (12 TEX) ------- NO.	-.03	-.03	-.04	-.04	-.11	-.12	-.20	-.23	+.57	+1.00	+.04
SPINNING POTENTIAL --- NO.	-.31	+.88	+.91	+.91	+.22	+.29	+.07	+.02	+.21	+.04	+1.00

TABLE 12.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS ON CARDED YARN FROM 10 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

SIMPLE CORRELATION COEFFICIENTS (r's)

TEST ITEM	CLASSIFICATION		FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		STEL. 1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK		SUGAR CONTENT
	GRADE	STAPLE	HVI:UHM UNIF.	M/UHM UNIF.		HVI:STEL.			VISIBLE WASTE	TOTAL WASTE	Rd	+b	
CLASSIFICATION:													
GRADE ------- INDEX	+1.00	+.83	+.33	+.66	-.32	+.64	+.56	+.17	-.65	-.60	+.72	+.46	+.37
STAPLE ------ 32ND IN.	+.83	+1.00	+.71	+.88	+.02	+.68	+.72	+.42	-.20	-.18	+.46	+.35	+.55
FIBER LENGTH:													
UPPER HALF MEAN ---- IN.	+.33	+.71	+1.00	+.70	+.63	+.48	+.48	+.02	+.18	+.12	-.14	+.25	+.22
MEAN/UHM UNIF. ---- PCT.	+.66	+.88	+.70	+1.00	+.19	+.31	+.39	+.37	-.12	-.10	+.28	+.23	+.51
MICRONAIRE ------ RDG.	-.32	+.02	+.63	+.19	+1.00	+.03	-.21	-.33	+.34	+.20	-.75	+.07	-.40
FIBER STRENGTH:													
HVI 1/8" GAGE ---- G/TEX	+.64	+.68	+.48	+.31	+.03	+1.00	+.76	+.09	-.27	-.32	+.25	+.48	+.14
STEL. 1/8 " GAGE - G/TEX	+.56	+.72	+.48	+.39	-.21	+.76	+1.00	+.40	+.03	+.06	+.51	+.20	+.58
STEL. ELONGATION -- PCT.	+.17	+.42	+.02	+.37	-.33	+.09	+.40	+1.00	+.37	+.44	+.35	-.25	+.71
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.65	-.20	+.18	-.12	+.34	-.27	+.03	+.37	+1.00	+.96	-.41	-.70	+.22
TOTAL WASTE ------ PCT.	-.60	-.18	+.12	-.10	+.20	-.32	+.06	+.44	+.96	+1.00	-.27	-.74	+.41
COLOR OF RAW STOCK:													
GRAYNESS (Rd) ----- PCT.	+.72	+.46	-.14	+.28	-.75	+.25	+.51	+.35	-.41	-.27	+1.00	-.01	+.60
YELLOWNESS (+B) -- UNITS	+.46	+.35	+.25	+.23	+.07	+.48	+.20	-.25	-.70	-.74	-.01	+1.00	-.23
SUGAR CONTENT ----- PCT.	+.37	+.55	+.22	+.51	-.40	+.14	+.58	+.71	+.22	+.41	+.60	-.23	+1.00
PICKER AND													
CARD WASTE ------- PCT.	-.64	-.67	-.46	-.51	+.09	-.57	-.56	-.14	+.43	+.30	-.38	-.63	-.51
YARN STRENGTH:													
22s (27 TEX) ----- LBS.	+.66	+.88	+.53	+.70	-.23	+.59	+.88	+.65	+.02	+.07	+.55	+.21	+.74
50s (12 TEX) ----- LBS.	+.64	+.85	+.53	+.66	-.19	+.62	+.88	+.60	-.03	-.02	+.50	+.34	+.63
AVG. BREAK FACTOR -- NO.	+.66	+.87	+.53	+.68	-.21	+.61	+.88	+.63	-.01	+.02	+.53	+.28	+.69
YARN ELONGATION:													
22s (27 TEX) ----- PCT.	+.17	+.47	+.28	+.41	-.26	+.24	+.65	+.61	+.36	+.40	+.21	-.07	+.69
50s (12 TEX) ----- PCT.	+.56	+.82	+.72	+.82	+.25	+.53	+.67	+.26	-.02	-.02	+.26	+.24	+.48
YARN APPEARANCE:													
22s (27 TEX) ----- INDEX	+.31	+.42	+.66	+.38	+.43	+.38	+.24	-.37	-.20	-.37	-.21	+.52	-.34
50s (12 TEX) ----- INDEX	+.43	+.47	+.47	+.36	+.32	+.46	+.13	-.01	-.28	-.44	-.10	+.51	-.34
YARN NEPS:													
22s (27 TEX) ----- NO.	-.22	-.17	-.21	-.13	-.36	-.33	+.03	+.31	+.56	+.66	+.26	-.89	+.48
50s (12 TEX) ----- NO.	+.01	-.12	-.23	-.01	-.03	-.04	-.37	-.15	-.13	-.07	-.12	-.23	-.02
SPINNING POTENTIAL --- NO.	+.34	+.74	+.65	+.66	+.01	+.42	+.77	+.62	+.34	+.41	+.25	+.04	+.80

TABLE 12.--CONTINUED

YARN PROPERTIES

SIMPLE CORRELATION COEFFICIENTS (r's)

TEST ITEM	PICKER & GARD WASTE	STRENGTH 22s	STRENGTH 50s	:BR. FACTOR	ELONGATION 22s	ELONGATION 50s	APPEARANCE 22s	APPEARANCE 50s	NEPS 22s	NEPS 50s	SPINNING POTENTIAL
GLASSIFICATION:											
GRADE ------ INDEX	-.64	+.66	+.64	+.66	+.17	+.56	+.31	+.43	-.22	+.01	+.34
STAPLE ------ 32ND IN.	-.67	+.88	+.85	+.87	+.47	+.82	+.42	+.47	-.17	-.12	+.74
FIBER LENGTH:											
UPPER HALF MEAN ---- IN.	-.46	+.53	+.53	+.53	+.28	+.72	+.66	+.47	-.21	-.23	+.65
MEAN/UHM UNIF. ---- PCT.	-.51	+.70	+.66	+.68	+.41	+.82	+.38	+.36	-.13	-.01	+.66
MIGRONAIRE ------ RDG.	+.09	-.23	-.19	-.21	-.26	+.25	+.43	+.32	-.36	-.03	+.01
FIBER STRENGTH:											
HVI 1/8 GAGE --- G/TEX	-.57	+.59	+.62	+.61	+.24	+.53	+.38	+.46	-.33	-.04	+.42
STEL. 1/8" GAGE - G/TEX	-.56	+.88	+.88	+.88	+.65	+.67	+.24	+.13	+.03	-.37	+.77
STEL. ELONGATION -- PCT.	-.14	+.65	+.60	+.63	+.61	+.26	-.37	-.01	+.31	-.15	+.62
SHIRLEY ANALYZER:											
VISIBLE WASTE ----- PGT.	+.43	+.02	-.03	-.01	+.36	-.02	-.20	-.28	+.56	-.13	+.34
TOTAL WASTE ----- PGT.	+.30	+.07	-.02	+.02	+.40	-.02	-.37	-.44	+.66	-.07	+.41
COLOR OF RAW STOCK:											
GRAYNESS (Rd) ----- PGT.	-.38	+.55	+.50	+.53	+.21	+.26	-.21	-.10	+.26	-.12	+.25
YELLOWNESS (+B) -- UNITS	-.63	+.21	+.34	+.28	-.07	+.24	+.52	+.51	-.89	-.23	+.04
SUGAR CONTENT ------ PCT.	-.51	+.74	+.63	+.69	+.69	+.48	-.34	-.34	+.48	-.02	+.80
PICKER AND CARD WASTE ------ PGT.	+1.00	-.60	-.61	-.61	-.26	-.52	-.13	-.13	+.37	+.08	-.56
YARN STRENGTH:											
22s (27 TEX) ----- LBS.	-.60	+1.00	+.98	+.99	+.75	+.74	+.24	+.23	+.04	-.32	+.89
50s (12 TEX) ----- LBS.	-.61	+.98	+1.00	+1.00	+.70	+.74	+.32	+.31	-.13	-.46	+.84
AVG. BREAK FACTOR -- NO.	-.61	+.99	+1.00	+1.00	+.73	+.74	+.28	+.27	-.05	-.39	+.87
YARN ELONGATION:											
22s (27 TEX) ----- PGT.	-.26	+.75	+.70	+.73	+1.00	+.53	+.07	-.20	+.33	-.11	+.84
50s (12 TEX) ----- PGT.	-.52	+.74	+.74	+.74	+.53	+1.00	+.37	+.13	-.18	-.11	+.73
YARN APPEARANCE:											
22s (27 TEX) ----- INDEX	-.13	+.24	+.32	+.28	+.07	+.37	+1.00	+.71	-.47	-.34	+.16
50s (12 TEX) ----- INDEX	-.13	+.23	+.31	+.27	-.20	+.13	+.71	+1.00	-.55	-.29	+.01
YARN NEPS:											
22s (27 TEX) ----- NO.	+.37	+.04	-.13	-.05	+.33	-.18	-.47	-.55	+1.00	+.26	+.17
50s (12 TEX) ----- NO.	+.08	-.32	-.46	-.39	-.11	-.11	-.34	-.29	+.26	+1.00	-.23
SPINNING POTENTIAL --- NO.	-.56	+.89	+.84	+.87	+.84	+.73	+.16	+.01	+.17	-.23	+1.00

TABLE 12A.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS ON COMBED YARN FROM 9 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

TEST ITEM	COMBER WASTE	YARN PROPERTIES							
		STRENGTH		ELONGATION		APPEARANCE		NEPS	
		22s	50s	22s	50s	22s	50s	22s	50s
		SIMPLE CORRELATION COEFFICIENTS (r's)							
CLASSIFICATION:									
GRADE -------- INDEX	-.55	+.73	+.72	-.19	+.08	-.10	+.33	+.37	-.39
STAPLE -------- 32ND IN.	-.71	+.84	+.82	-.12	+.26	+.00	+.61	+.09	-.51
FIBER LENGTH:									
UPPER HALF MEAN ---- IN.	-.46	+.39	+.36	+.05	+.21	+.12	+.84	-.41	-.64
MEAN/UHM UNIF. --- PCT.	-.51	+.64	+.66	+.13	+.15	+.00	+.58	+.00	-.50
MICRONAIRE ------- RDG.	+.12	-.32	-.31	-.14	-.22	-.06	+.65	-.80	-.55
FIBER STRENGTH:									
HVI 1/8" GAGE --- G/TEX	-.59	+.57	+.49	-.57	+.15	-.22	+.53	-.16	-.37
STEL. 1/8 " GAGE - G/TEX	-.78	+.84	+.77	-.12	+.68	+.28	+.36	+.20	-.14
STEL. ELONGATION -- PCT.	-.36	+.56	+.63	-.00	+.28	+.12	-.19	+.38	+.18
SHIRLEY ANALYZER:									
VISIBLE WASTE ----- PCT.	+.21	-.15	-.09	+.22	+.31	+.17	-.17	-.18	+.33
TOTAL WASTE ----- PCT.	+.30	-.19	-.12	+.25	+.30	+.16	-.31	-.07	+.42
COLOR OF RAW STOCK:									
GRAYNESS (Rd) --- PCT.	-.31	+.64	+.67	-.00	+.29	+.19	-.28	+.88	+.06
YELLOWNESS (+B) -- UNITS	-.59	+.23	+.10	-.19	-.12	+.05	+.69	-.34	-.58
SUGAR CONTENT ------- PCT.	-.40	+.79	+.85	+.24	+.60	+.18	-.26	+.73	+.29
PICKER AND CARD WASTE -------- PCT.	+.60	-.44	-.34	+.32	+.05	+.04	-.65	+.10	+.62
COMBER WASTE -------- PCT.	+1.00	-.85	-.76	-.16	-.62	-.45	-.60	-.06	+.32
YARN STRENGTH:									
22s (27 TEX) ------ LBS.	-.85	+1.00	+.98	+.14	+.64	+.35	+.31	+.43	-.19
50s (12 TEX) ------ LBS.	-.76	+.98	+1.00	+.14	+.59	+.34	+.24	+.51	-.19
YARN ELONGATION:									
22s (27 TEX) ------ PCT.	-.16	+.14	+.14	+1.00	+.52	+.56	-.10	+.26	+.29
50s (12 TEX) ------ PCT.	-.62	+.64	+.59	+.52	+1.00	+.65	+.07	+.28	+.26
YARN APPEARANCE:									
22s (27 TEX) ----- INDEX	-.45	+.35	+.34	+.56	+.65	+1.00	+.17	+.32	-.19
50s (12 TEX) ----- INDEX	-.60	+.31	+.24	-.10	+.07	+.17	+1.00	-.58	-.81
YARN NEPS:									
22s (27 TEX) ------ NO.	-.06	+.43	+.51	+.26	+.28	+.32	-.58	+1.00	+.29
50s (12 TEX) ------ NO.	+.32	-.19	-.19	+.29	+.26	-.19	-.81	+.29	+1.00

NOTE: INSUFFICIENT COTTON FOR COMBED YARN TESTS ON ONE OF THE 10 LONG STAPLE SPINNING LOTS.

TABLE 13.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 25 SHORT STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

REGRESSION COEFFICIENTS (b's)

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION		FIBER LENGTH		MICRO-NAIRE	1/8" GAGE STRENGTH		1/8" ELON-GATION	S.A. NON-LINT	COLOR OF RAW STOCK		SUGAR CON-TENT	STAND. ERROR OF EST.	R²
			GRADE	STAPLE	HVI UHM	M/UHM UNIF.		HVI	STEL.			Rd	+b			
TOTAL, PICKER & CARD WASTE --	1	+4.19									+.63				.50	.46
	2	+3.40									+.60			+1.81	.48	.52
	3	+18.13		-.25							+.64	-.08			.47	.56
	4	-4.93		-.37		+.30	-.74				+.54				.44	.63
	5	-20.58		-.41		+.46	-1.02				+.56		+.50		.38	.74
YARN STRENGTH:																
8s (74 TEX) -	1	-464.64				+9.73									11.70	.47
	2	-379.24			+131.28	+7.09									11.24	.53
	3	-599.84	-559.84			+8.38			+3.41			+1.66			11.03	.57
	4	-666.99				+9.93	-8.82		+3.79			+1.78			10.92	.60
	5	-679.82		+3.11		+8.66	-6.95		+3.53			+2.00			11.02	.61
22s (27 TEX) -	1	+35.98							+2.81						4.76	.37
	2	-29.70		+2.42					+2.39						4.54	.46
	3	-142.52		+3.19					+2.42						4.03	.59
	4	-149.06		+3.09					+2.09		+2.38				3.73	.67
	5	-204.90		+3.47					+2.20		+2.72		+2.26		3.65	.70
BREAK FACTOR -	1	+367.28			+2057.45										96.45	.39
	2	+277.83			+1987.98										92.79	.46
	3	-1370.94				+50.01				-134.60	+44.78				86.86	.55
	4	-2694.04				+49.47		+24.31		-119.79		+14.52			84.78	.59
	5	-3148.49			+1355.91	+48.43		+31.21		-89.68		+8.93		+399.39	83.38	.63
YARN ELONGATION:																
8s (74 TEX) -	1	+16.67										-.11			.40	.24
	2	+9.37		+.19								-.10			.39	.33
	3	+10.24		+.26					-.13			-.10			.36	.45
	4	+10.55	-.02	+.26					-.11		-.11	-.09			.36	.48
	5	+12.14		+.25					-.11		-.20				.36	.51
22s(27 TEX) -	1	+13.02										-.08			.34	.16
	2	+6.97							-.12			-.06			.34	.23
	3	+8.63		+.18				+.12	-.10						.32	.33
	4	+.24		+.17				+.10	-.11				+.21		.32	.38
	5	+2.46	-.02	+.15				+.10	-.12				+.23		.31	.42

TABLE 13.--CONTINUED

REGRESSION COEFFICIENTS (b's)

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH HVI	1/8" GAGE STRENGTH STEL.	1/8" ELONGATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT	STAND. ERROR OF EST.	R^2
YARN APPEARANCE:																
8s (74 TEX) -	1	+69.01					+9.30								8.17	.16
	2	+212.66		-4.74			+10.16								7.53	.32
	3	+205.85		-5.80			+7.65		+2.24						7.20	.40
	4	+194.30		-4.64			+6.59	-1.43	+2.81						7.16	.44
	5	+166.77		-4.51			+6.32	-1.32	+2.94				+1.92		7.27	.45
22s (27 TEX) -	1	+42.57					+14.65								8.29	.31
	2	+10.53					+14.80	+1.36							8.22	.35
	3	+127.96		-4.86			+15.83	+2.63							7.76	.45
	4	+126.86		-5.04			+16.70	+2.54			+1.53				7.87	.46
	5	-4.29		-5.69		+1.85	+12.74	+2.54					+2.40		8.02	.47
YARN NEPS:																
8s (74 TEX) -	1	-20.96	+.27												2.81	.16
	2	-9.64	+.30										+1.72		2.70	.26
	3	-22.79	+.26							-2.16			+2.63		2.60	.34
	4	-92.58		+1.28			+3.65					+.68		+8.59	2.47	.44
	5	-155.74					+4.01			-2.22		+.86	+3.18	+13.37	2.37	.51
22s (27 TEX) -	1	+217.59								-29.74					26.27	.21
	2	+99.27						+7.20		-37.35					24.85	.32
	3	-388.31						+9.60		-31.96		+5.19			23.61	.42
	4	-382.19						+9.39		-27.04		+5.23		-71.13	23.28	.46
	5	-226.06						+12.62	-5.98	-38.71		+4.93		-74.31	23.22	.49
SPINNING POTENTIAL	1	-141.63			+200.79										7.40	.51
	2	-225.98		+4.42	+145.59										7.09	.57
	3	-432.78		+8.80	+145.57							+1.90			6.64	.64
	4	-351.40	+.95	+4.94	+180.73						+6.14				6.20	.70
	5	-353.42	+1.08	+4.40			-6.41		+2.93		+5.61				5.96	.74

TABLE 14.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 137 MEDIUM STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

REGRESSION COEFFICIENTS (b's)

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH HVI	1/8" GAGE STRENGTH STEL.	1/8" ELONGATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT	STAND. ERROR OF EST.	R^2
TOTAL PICKER & CARD WASTE	1	+4.05									+.84				.53	.61
	2	+2.67					+.17				+.81		+.17		.51	.64
	3	+1.68					+.29				+.84		+.19		.51	.64
	4	+9.61				-.10	+.34	+.04			+.82		+.19		.50	.66
	5	+10.19				-.13					+.84		+.19		.50	.66
YARN STRENGTH:																
22s (27 TEX)	1	-13.87							+5.07						6.15	.66
	2	-138.75				+1.63			+4.77						5.96	.68
	3	-222.08		+1.91		+3.08	-6.69		+4.53						5.46	.74
	4	-285.59		+1.87		+3.33	-9.08		+3.98						4.94	.79
	5	-286.50				+3.33	-8.91	+.42	+3.59						4.93	.79
50s (12 TEX)	1	-18.29							+2.31						3.37	.57
	2	-40.58		+ .78					+2.11						3.22	.61
	3	-133.95				+1.69	-3.27		+2.02						3.03	.66
	4	-172.93		+1.17		+1.84	-4.73		+1.68						2.67	.74
	5	-158.73		+1.10		+1.80	-4.69		+1.79			-.14			2.66	.74
BREAK FACTOR	1	-609.88							+113.60						148.18	.63
	2	-1526.53		+32.12					+105.00						142.52	.66
	3	-5791.63				+76.16	-155.23		+100.18						131.48	.71
	4	-7464.66		+50.22		+82.74	-218.16		+85.79						116.23	.78
	5	-7012.00		+47.85		+81.24	-216.66	+.07	+89.40			-4.52			116.12	.78
YARN ELONGATION:																
22s (27 TEX)	1	+3.90								+.42					.38	.31
	2	+5.64					-.35			+.38					.35	.41
	3	+3.72		+.06			-.41			+.40					.34	.44
	4	+5.35		+.06			-.42			+.38		-.02			.34	.45
	5	+3.66		+.06			-.43	-.07		+.42					.34	.47
50s (12 TEX)	1	+2.94								+.32					.38	.20
	2	+4.48					-.31			+.29					.36	.29
	3	-4.65				+.12	-.45			+.29					.35	.35
	4	-6.45				+.15	-.56			+.29			+.11	-.57	.34	.39
	5	-7.85				+.16	-.56			+.26				-.80	.33	.41

TABLE 14.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH IIVI	1/8" GAGE STRENGTH STEL.	1/8" ELONGATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT	STAND. ERROR OF EST.	R^2
								REGRESSION COEFFICIENTS (b's)								
YARN APPEARANCE:																
22s (27 TEX) -	1	-112.12													7.27	.12
	2	+130.00				+2.66							-3.75	+19.94	7.10	.17
	3	-50.22				+2.18							-3.27	+17.56	6.77	.25
	4	+221.00									-3.44	-1.09	-3.88	+28.75	6.63	.29
	5	+79.48				+1.55					-2.76	-.93	-3.55	+25.83	6.48	.33
50s (12 TEX) -	1	-212.30				+3.57									7.70	.19
	2	-205.01				+3.45									7.61	.21
	3	-152.78			-44.14	+3.78							-3.32	+ 8.55	7.33	.27
	4	-65.62				+2.95						-.94	-3.83	+24.34	7.00	.34
	5	-14.28				+2.62					-1.68	-1.22	-3.76	+26.62	6.94	.36
YARN NEPS:																
22s (27 TEX) -	1	-92.80		+3.47											14.13	.10
	2	-83.06			+69.62			+1.39							13.93	.14
	3	-63.44			+66.41			+1.40		-2.74					13.88	.15
	4	-95.71			+83.52			+1.27		-3.49			+2.46		13.85	.16
	5	-79.05			+66.07			+1.40		-3.57	-10.65	+2.76			13.84	.17
50s (12 TEX) -	1	-413.88			+499.43										73.01	.14
	2	-303.12			+555.14				-7.27						72.31	.16
	3	+926.82			+476.90	-18.13	+35.33								71.47	.19
	4	+798.92			+509.64	-15.58	+31.18		-4.10						71.46	.20
	5	+1090.86	+3.04		+444.33	-18.00	+26.75					-5.08			71.35	.20
SPINNING POTENTIAL	1	-33.93							+4.01						7.43	.46
	2	-97.70			+73.41				+3.33						6.16	.63
	3	-87.89			+84.00		-4.52		+3.25						5.91	.66
	4	-330.88		+1.60	+87.64	+3.35	-8.61		+2.61						5.20	.74
	5	-352.43			+56.07	+3.42	-9.10		+2.47						5.12	.75

TABLE 15.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 10 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH HVI	1/8" GAGE STRENGTH STR.	1/8" ELONGATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT	STAND. ERROR OF EST.	R^2
							REGRESSION COEFFICIENTS (b's)									
TOTAL PICKER & CARD WASTE --	1	+36.20		-.79											.92	.45
	2	+24.92											-1.79	-5.62	.50	.86
	3	+18.87								+1.00			-1.72	-7.45	.43	.91
	4	+20.95					-.42			+.96			-1.73	-7.84	.43	.93
	5	-45.98				+.91	-2.46				+1.05		-1.12	-13.21	.26	.98
YARN STRENGTH:																
22s (27 TEX) -	1	-320.51		+12.01											6.85	.77
	2	-549.51				+6.53			+5.42						4.42	.92
	3	-504.48				+5.46			+4.81	+9.51					2.67	.97
	4	-534.16				+6.18	-3.82		+4.63	+7.95					2.35	.98
	5	-563.15				+7.39	-9.39		+5.00	+6.74					2.00	.99
50s (12 TEX) -	1	-38.89							+3.23						3.25	.78
	2	-248.77				+2.75			+2.70						2.41	.89
	3	-232.13				+2.35			+2.47	+3.52					2.15	.93
	4	-221.44		+2.31		+1.83			+2.23	+5.40			+2.97		1.51	.97
	5	-132.09			-1.41			-.66	+2.68	+4.44			+3.77		1.10	.99
BREAK FACTOR -	1	-1529.49							+154.23						153.97	.78
	2	-12263.97				+140.56			+127.10						103.03	.91
	3	-11352.54				+118.88			+114.73	+192.59					77.32	.96
	4	-10999.34				+101.62			+106.88	+254.68		+97.95			60.01	.98
	5	-6141.20		+130.17				-62.89	+120.21	+209.66		+127.49			40.33	.99
YARN ELONGATION:																
22s (27 TEX) -	1	+6.09												+1.49	.24	.48
	2	+4.74						-.12	+.20						.23	.57
	3	+3.54						-.09	+.16						.23	.64
	4	-29.47	-.12			+.57	-.98	+.20		+.24					.14	.89
	5	-42.27	-.17			+.81	-1.42	+.26		-.40					.08	.97
50s (12 TEX) -	1	-8.03		+.36											.26	.68
	2	-8.95		+.36			+.26								.26	.73
	3	-22.46				+.29	+.27	+.12							.20	.86
	4	-28.76			-8.95	+.44	+.82	+.20							.17	.92
	5	-33.04			-12.11	+.54	+.91	+.25		-.30					.13	.96

TABLE 15.--CONTINUED

REGRESSION COEFFICIENTS (b's)

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	GRADE	STAPLE	HVI UHM	M/UHM UNIF.	MICRONAIRE	HVI (1/8" GAGE STRENGTH)	STEL.	1/8" ELONGATION	S.A. NON-LINT	Rd	+b	SUGAR CONTENT	STAND. ERROR OF EST.	R²
YARN APPEARANCE:																
22s (27 TEX)	1	-192.70			+253.01										11.25	.44
	2	-228.58			+296.18									-50.00	8.93	.69
	3	-376.63			+544.31		-31.40							-97.84	5.01	.92
	4	-403.54			+637.38		-38.08	-1.96						-107.32	4.42	.95
	5	-362.67			+664.40		-44.53	-1.81				-.68		-104.99	4.51	.95
50s (12 TEX)	1	+5.20			+104.54										6.74	.26
	2	-38.13									-4.04		+7.20		6.11	.47
	3	-212.83		+6.89						+8.17				-58.48	3.79	.82
	4	-198.29	+.86		+104.61					+14.00				-60.04	3.38	.88
	5	-104.40	+3.61		+396.30					+31.41				-61.08	2.21	.96
YARN NEPS:																
22s (27 TEX)	1	+154.15												-14.60	4.13	.79
	2	+176.59					-6.49							-14.26	3.36	.88
	3	+115.61			+77.40		-11.00							-15.38	2.47	.94
	4	+153.73			+118.86		-18.71					-.69		-15.77	1.97	.97
	5	+173.07			+139.11		-21.36			-3.46		-.75		-16.62	1.45	.99
50s (12 TEX)	1	+823.37							-27.16						127.13	.14
	2	+412.26						+46.68	-59.92						123.97	.28
	3	+644.42						+96.24	-130.35					+755.38	99.37	.61
	4	+1097.69						+114.14	-133.58				-92.26	+674.43	95.11	.70
	5	+1842.49						+116.65	-134.86	-125.27			-102.80	+905.74	93.85	.77
SPINNING POTENTIAL	1	+48.93												+78.13	9.05	.64
	2	-164.25			+188.70									+67.51	5.77	.87
	3	+73.81							+4.69			-1.85		+75.18	4.29	.94
	4	-249.72				+4.06			+4.36			-1.78		+63.81	2.40	.98
	5	+80.41		+1.58				-4.26	+7.20			-3.20		+66.43	1.34	1.0

TABLE 15A.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, ON COMBED YARN FROM 9 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1982.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH HVI	1/8" GAGE STRENGTH SIFL.	1/8" ELONGATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CONTENT	STAND. ERROR OF EST.	R^2
						REGRESSION COEFFICIENTS (b's)										
COMBER WASTE --	1	+38.86							-.88						1.37	.60
	2	+50.33							-.77				-1.60		1.10	.78
	3	+50.26						+.73	-1.28				-2.33		.88	.88
	4	+60.67			-11.24			+.68	-1.11	-1.72			-2.66		.61	.95
	5	+71.62						+.75	-1.04	-2.00			-2.66		.38	.99
YARN STRENGTH:																
22s (27 TEX) -	1	-197.28		+9.13											6.36	.70
	2	+3.64											+11.20	+121.09	3.71	.91
	3	-73.02					+4.87					+4.91		+17.97	+129.47	2.51	.97
	4	-75.69										+3.36		+16.35	+140.29	1.91	.98
	5	-469.74										+9.88	+1.31	+19.47	+67.22	1.01	1.0
50s (12 TEX) -	1	+34.32													3.37	.72
	2	-72.24		+3.08										+56.26	2.05	.91
	3	-89.63		+3.11						+3.09				+37.80	1.97	.93
	4	-51.31					+4.23			+3.20			+5.28	+29.91	1.40	.97
	5	-121.27			+59.35					+6.21		+.46	+2.63	+29.39	1.11	.99
BREAK FACTOR -	1	-5371.44		+222.25											157.56	.69
	2	-221.20											+241.75	+2992.60	96.04	.90
	3	-1248.16					+188.07						+261.47	+3512.50	67.13	.96
	4	-1938.99					+184.99			-126.02			+265.04	+3196.96	56.70	.98
	5	+20345.07				-336.85	+896.14		-122.74				+775.07	+9250.59	56.89	.98
YARN ELONGATION:																
22s (27 TEX) -	1	+8.66													.19	.32
	2	+8.36						-.07	+.11						.15	.64
	3	+4.44			+7.02		-.49	-.16							.11	.84
	4	+6.00			+8.68		-.82	-.14				-.03			.08	.93
	5	+6.64			+7.37		-.70	-.17	+.05			-.03			.07	.96
50s (12 TEX) -	1	+3.66							+.07						.15	.46
	2	+4.55						-.12	+.11						.07	.90
	3	+5.18						-.13	+.19			-.01			.06	.94
	4	+5.76						-.15	+.21		-.04	-.02			.06	.96
	5	+9.59						-.18	+.27		-.22	-.04	-.24		.04	.98

NOTE: INSUFFICIENT COTTON FOR COMBED YARN TESTS ON ONE OF THE 10 LONG STAPLE SPINNING LOTS.

TABLE 15A.--CONTINUED

REGRESSION COEFFICIENTS (b's)

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION GRADE	CLASSIFICATION STAPLE	FIBER LENGTH HVI UHM	FIBER LENGTH M/UHM UNIF.	MICRONAIRE	1/8" GAGE STRENGTH HVI	1/8" GAGE STRENGTH STEL.	1/8" ELON-GATION	S.A. NON-LINT	COLOR OF RAW STOCK Rd	COLOR OF RAW STOCK +b	SUGAR CON-TENT	STAND. ERROR OF EST.	R^2
YARN APPEARANCE:																
22s (27 TEX) -	1	+106.41							+.51						3.42	.08
	2	+123.53						-2.35	+2.32						2.40	.61
	3	+117.87	+.32					-3.22	+3.71					-24.11	1.88	.80
	4	+101.40	+.43					-4.19	+4.32					-36.89	1.55	.89
	5	+77.53						-4.61	+4.69	+3.17				-50.77	1.23	.95
50s (12 TEX) -	1	-214.29			+271.27										7.14	.71
	2	-265.23			+228.51								+11.25		3.41	.94
	3	-181.79					+25.90						+17.99	+68.59	1.91	.99
	4	-41.77				-2.17	+29.40						+19.91	+90.16	1.67	.99
	5	+51.45				-3.65	+33.12		-.90				+23.15	+116.49	1.28	1.0
YARN NEPS:																
22s (27 TEX) -	1	-60.91										+1.17			2.81	.77
	2	-37.69						+1.30				+1.31			1.71	.93
	3	-54.99						+1.10			+1.45	+1.42			1.21	.97
	4	-39.92				+12.79	-1.81	-.99			+1.48	+1.27			1.19	.98
	5	-42.62					-3.01	-1.09			+1.44	+1.21			1.31	.98
50s (12 TEX) -	1	+928.25			-732.51										35.97	.41
	2	+905.71	-5.38				-80.24								29.26	.67
	3	+1516.18					-116.26					-8.16	-40.23		21.14	.85
	4	+1584.79					-124.84		+5.23			-9.92	-43.70		21.03	.88
	5	+2689.77					-138.26		+15.83	-47.85		-17.37	-112.45		16.57	.95

NOTE: INSUFFICIENT COTTON FOR COMBED YARN TESTS ON ONE OF THE 10 LONG STAPLE SPINNING LOTS.

DESCRIPTION OF STATISTICS USED IN ANALYSIS

Some of the statistical concepts used in this study may be un-
familiar to many who will find the information in this report
useful. Results reported in this study include the means, stan-
dard deviations, simple correlations, regression equations and
coefficients of determination (R-squares). Formulas for each of
these results may be found in any good textbook on statistical
correlation. However, for those not familiar with these concepts,
the following common language explanation is given for each item
as it is used in this report:

   A. MEAN VALUE is the simple arithmetical average of each
measured property for the spinning lots included in the study.

   B. STANDARD DEVIATION is a measure of dispersion around the
mean value expressed in the same terms as the variable. For a
normal distribution, approximately 68 percent of the values will
be within plus or minus one standard deviation of the mean; 95 per-
cent within plus or minus two standard deviations; and nearly all
values will be within plus or minus three standard deviations.

   Example: (From Table 9, page 61) The mean or average
   HVI upper half mean length for the short staple cottons
   is 0.958 inches. The standard deviation is 0.037 inches.
   This indicates that 68 percent of the lots tested in the
   short staple group should have a fiber length between
   0.921 and 0.995 inches. The fiber length of 95 percent
   of the lots tested fall between 0.884 and 1.032 inches
   and nearly all would be between 0.847 and 1.069 inches.

   C. SIMPLE CORRELATION COEFFICIENT (r) is a measure of the
linear relationship between two variables, i.e., how one variable
is associated with the other. A correlation coefficient of 0 in-
dicates no relationship, and 1.0 indicates a perfect relationship.
A plus sign before the correlation coefficient indicates that the
value of both variables change in the same direction, whereas a
minus sign indicates that they change in opposite directions.

   Example: (From Table 11, page 67, line 1) The simple
   correlation coefficient of the grade index with picker
   and card waste is -.60. This indicates that grade and
   picker and card waste are inversely related, i.e., as
   one goes up or down, the other goes in the opposite
   direction.

D. REGRESSION EQUATION or prediction equation is used to
estimate changes in the dependent variable which will result from
changes in the independent variable or variables. It is written:

$$Y = a + b X + b X + ... + b X$$

where Y is the dependent variable and the X's
are the independent variables.

The constant "a" indicates the starting point or height of the re-
gression line when it is to be plotted on a graph or to be used in
calculating changes in the dependent variable. The regression co-
efficient "b" indicates the directional change in the dependent
variable that is associated with changes in the independent vari-
able. The spread or scatter of the data around the regression
line is measured by the standard error. The standard error has
the same relationship to the regression line as the standard de-
viation has to the mean value (see paragraph B, above).

Example: (From Table 14, three-variable model, page 73)
The constant, coefficients and standard error for the re-
gression equation with 22s yarn strength as the dependent
variable are:

    Constant (a)............................. -222.08
    Regression Coefficients (b):
      Mean/UHM Uniformity...................   +3.08
      Micronaire............................   -6.69
      Stelometer 1/8-Inch Gage
        Fiber Strength......................   +4.53
    Standard Error........................... +/-5.46

With regression coefficients (b's) of +3.08 for M/UHM uniformity
index, -6.69 for micronaire, and +4.53 for Stelometer 1/8-inch
gage fiber strength, the following average conditions should
exist:

(1) With any unit changes (1.0 in uniformity), yarn
     strength should change 3.08 pounds in the same
     direction.

(2) With any unit changes (0.1 in micronaire),
     yarn strength should change .669 pounds in the
     opposite direction.

D.   REGRESSION EQUATION (continued)

(3)   With any unit changes (1.0 G/tex in Stelometer 1/8-inch
      gage fiber strength), yarn strength should change 4.53
      pounds in the same direction.

Expressing the equation algebraically:

Yarn strength 22s (lbs) = -222.08 + 3.08 (HVI uniformity)
                          -   6.69 (micronaire)
                          +   4.53 (Stelometer 1/8-inch gage
                                    fiber strength)

To predict the yarn strength from a bale of cotton with a fiber
uniformity index of 81, a micronaire of 4.2 and a fiber strength
of 22 grams per tex, the equation would be:

Yarn strength (lbs) = -222.08 + 3.08(81) - 6.69(4.2)
                      + 4.53(22)

Yarn strength (lbs) = 98.96

The standard error can be used to establish a lower and upper limit
about the predicted value. In this example, the standard error of
5.46 indicates that yarn strength from a bale of cotton with these
fiber properties should be 98.96 +/- 5.46 pounds or between 94 and
104 pounds 68 percent of the time.

Regression equations are given in the tables for simple and multiple
relationships. Equations for simple relationships may be calculated
by using the formula:

$$Y = a + bX$$

$$\text{where } a = \text{Mean } Y - b \, (\text{Mean } X)$$

$$b = r \, \frac{\text{Std. Dev. } Y}{\text{Std. Dev. } X}$$

Estimating an equation with more than one independent variable is
more complex. Most statistical textbooks describe the method for
estimating multivariate equations.

   E.   R-SQUARE (R) when multiplied by 100 will give the coef-
ficient of determination. The resulting percentage is the amount
of the variation in the dependent variable explained by the inde-
pendent variable(s). In the above example, R = .74; therefore,
74% of the variation in yarn strength is explained by fiber uni-
formity, micronaire and Stelometer 1/8-inch gage fiber strength.
The remaining variation in yarn strength (26%) is unexplained by
the three independent variables in this equation.

E.   R-SQUARE (continued)

For simple regressions (equations containing one independent vari-
able) the coefficient of determination can be obtained easily by
squaring the simple correlation coefficient (r) and multiplying
by 100.

The multiple correlation coefficient (R) can be obtained by taking
the square root of R-square. This coefficient is a measure of the
linear relationship between one dependent variable and one or more
independent variables. It has no plus or minus sign because one
independent variable may contribute positively, and another nega-
tively, in explaining the variation in the dependent variable. The
multiple R may fall between 0 and 1.0, with 0 indicating no rela-
tionship and 1.0 a perfect relationship.

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it
is well to keep in mind several factors which influence the results
and could lead to erroneous conclusions.

Results obtained from regression analysis are significantly influ-
enced by the specific variables included in an equation and by their
number. This is mainly due to interrelationships of fiber proper-
ties. As interrelated properties (independent variables) are added
to an equation, the specific contribution of a given property may
decrease sharply while at the same time the overall correlation will
increase. For example, a correlation of staple length with yarn
strength usually shows a good relationship, with a large amount of
the variation in yarn strength explainable by differences in staple
length. But as other measures are taken into consideration, partic-
ularly fiber strength at 1/8-inch gage, the importance of staple
length in explaining the total variation in yarn strength decreases
rather sharply; even though the total variation explained is in-
creased. This situation occurs because fiber strength is more
closely related to yarn strength than is staple length. Yet when
fiber strength is not included in the equation, some of the effects
of strength are evidenced through the interrelation of strength and
staple length. Perhaps the most important fact to be kept in mind
is that interpretations are no better than the principles used in
the analysis. To estimate the importance of a specific variable,
all of the available data should be studied using the appropriate
statistical techniques.

BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data published in Tables 1 through 8 of this report may be helpful in the interpretation of test results.

Classification

Classification was made in accordance with the official Cotton Standards for grade and staple length. These results are presented under the usual terms for the individual lots, but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables, is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for the various grades of upland cotton are shown below.

GRADE Name	Code	GRADE INDEX Plus (0)	White (1)	Light Spotted (2)	Spotted (3)	Tinged (4)	Light Gray (6)	Gray (7)
Good Middling	(1)		105	103	101		99	93
Strict Middling	(2)		104	102	99	91	98	91
Middling	(3)	102	100	97	93	82	92	84
Strict Low Middling	(4)	97	94	89	83	75	85	75
Low Middling	(5)	90	85	80	75	68		
Strict Good Ordinary	(6)	81	76					
Good Ordinary	(7)	73	70					
Below Grade	(8)		60					

The GRADE of cotton is obtained by evaluating color, leaf and prepparation in relation to the official standards. Grade provides an indication of fiber color and the waste content of a sample of cotton. Experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown in the subsequent section on manufacturing waste.

In comparing these average grade figures with the picker and card waste data, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

STAPLE LENGTH is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. Uniformity of fiber length, as well as other fiber properties, influences to some extent the classer's selection of the typical portion of the fibers on which the staple length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are also influenced by other fiber properties, the measurement of which will be discussed in the paragraphs which follow.

Fiber Tests

FIBER LENGTH and length uniformity data were obtained from a Motion Control High Volume Instrument system for short, medium and long staple American upland samples and by the Digital Fibrograph method for the extra long American Pima and upland samples.

The Fiber Length Analyzer on the Motion Control HVI measures the length and length uniformity of a specimen of cotton pneumatically. A prepared specimen is mechanically lowered into an orifice in the Fiber Length Analyzer. A certain volume of air is pulled through the orifice around the beard. The beard is slowly removed, causing a change in air pressure. The analyzer determines the upper half mean length and the mean length of the sample by analyzing this change in air pressure.

The upper half mean length is the average length of the longest one-half of the fibers. Upper half mean length is an indicator of yarn strength and spinning efficiency. The upper half mean length values are closely related to the classer's staple.

Length uniformity is a measure of the degree of uniformity of fibers in a sample. It is expressed as an index of the mean/upper half mean length ratio. Fiber uniformity is related to spinning efficiency, yarn uniformity and yarn strength.

The terms listed below may be helpful in interpreting the results:

Upper Half Mean Length		M/UHM Uniformity Index	
Below 0.97	Short	Below 77	Very Low
0.97 - 1.10	Medium	77 - 79	Low
1.11 - 1.28	Long	80 - 82	Average
Above 1.28	Extra Long	83 - 85	High
		Above 85	Very High

Data Source: 1,956 American upland lots tested from the crop of 1974-78.

Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton at random on a comb or combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at three length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe.

The Digital Fibrograph 2.5 percent span length values reported indicate the length which will be spanned by 2.5 percent of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5 percent of the amount at the starting point of 0.15 inch.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50 percent span length and 2.5 percent span length, expressed as percentages.

The following adjective descriptions will serve to classify cottons from the standpoint of 2.5% span length and fiber length uniformity.

2.5 Percent Span Length		50/2.5 Uniformity Ratio	
Below 0.97	Short	Below 41	Very Low
0.97 - 1.09	Medium	41 - 43	Low
1.10 - 1.28	Long	44 - 46	Average
Above 1.28	Extra Long	47 - 48	High
		Above 48	Very High

Data Source: 1,956 American upland lots tested from the crop of 1974-78.

FIBER FINENESS AND MATURITY in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. From 47 to 52 grains of cotton are placed in the instrument specimen holder and compressed to a fixed volume. Air at a known pressure is forced through the specimen and the amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight

per unit length or the cross-sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings, which are in international use, are taken from the curvilinear scale adopted in 1950. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, IIC-Shirley Fineness/Maturity Tester, and Fibrofine, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e., "micronaire reading." The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

FIBER STRENGTH is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the manufacturing process than the weak-fibered cottons. Tests for fiber strengths are made with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer and the Motion Control High Volume Instrument (HVI). The Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than are the results of zero gage tests.

The results of Stelometer 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM) and the International Standards Organization (ISO). A tex unit is equal to the weight in grams of 1,000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and the fiber length. Short staple cottons tend to have lower average strength values than long staple cottons.

Results for 1/8-inch gage tests are calculated by the use of formulas 1 or 2, depending on the instrument used. Stelometer results are adjusted to Pressley level by use of calibration cottons.

1. Pressley instrument-grams per tex (g/tex) =

$$\frac{\text{breaking load (lb)} \times 6.80}{\text{bundle weight (mg)}}$$

2. Stelometer instrument-grams per tex (g/tex) =

$$\frac{\text{breaking load (kg)} \times 15}{\text{bundle weight (mg)}}$$

The following terms may be applied to fiber strength:

Staple Length Group and Descriptive Designation	Pressley 1/8-Inch Gage Strength (Grams Per Tex)	HVI 1/8-Inch Gage Strength (Grams per Tex)
Short Staple:		
(Staple 31 and Shorter)		
Very Low	17 - 18	18 - 19
Low	19 - 20	20 - 21
Average	21 - 22	22 - 23
High	23 - 24	24 - 25
Very High	25 - 26	26 - 27
Medium Staple:		
(Staples 32 - 35)		
Very Low	16 - 18	17 - 19
Low	19 - 21	20 - 22
Average	22 - 24	23 - 25
High	25 - 27	26 - 28
Very High	28 - 30	29 - 31
Long Staple:		
(Staples 36 - 40)		
Very Low	18 - 20	18 - 20
Low	21 - 23	21 - 23
Average	24 - 26	24 - 26
High	27 - 29	27 - 29
Very High	30 - 32	30 - 32
Extra Long Staple:		
(Staple 41 and Longer)		
Very Low	27 - 29	-
Low	30 - 32	-
Average	33 - 35	-
High	36 - 38	-
Very High	39 - 41	-

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

FIBER ELONGATION results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

.Descriptive Designation	Fiber Elongation (Percent)
Very Low	4.9 and below
Low	5.0 - 5.8
Average	5.9 - 6.7
High	6.8 - 7.6
Very High	7.7 and above

Data Source: 1,956 American upland lots tested from the crops of 1974-78.

COLOR MEASUREMENTS were made on samples of raw cotton from each lot by using the Nickerson-Hunter Cotton Colorimeter. The basic color values reported are in terms of grayness (Rd) and yellowness (+b) scales designed especially for cotton. GRAYNESS indicates how light or dark the cotton sample is, and YELLOWNESS indicates how much yellow color is in the sample. A three-digit color code is used in place of the single codes for grayness and yellowness used in the past. The color code subdivides each grade into quadrants to denote relative color differences within a grade for a more precise color measurement.

The relationship of these color codes to grayness (Rd) and yellowness (+b) values and to the color of the Univeral Grade Standards for upland cotton is shown in Figure 2, page 89.

A color diagram for American Pima cotton is shown in Figure 3, page 90.
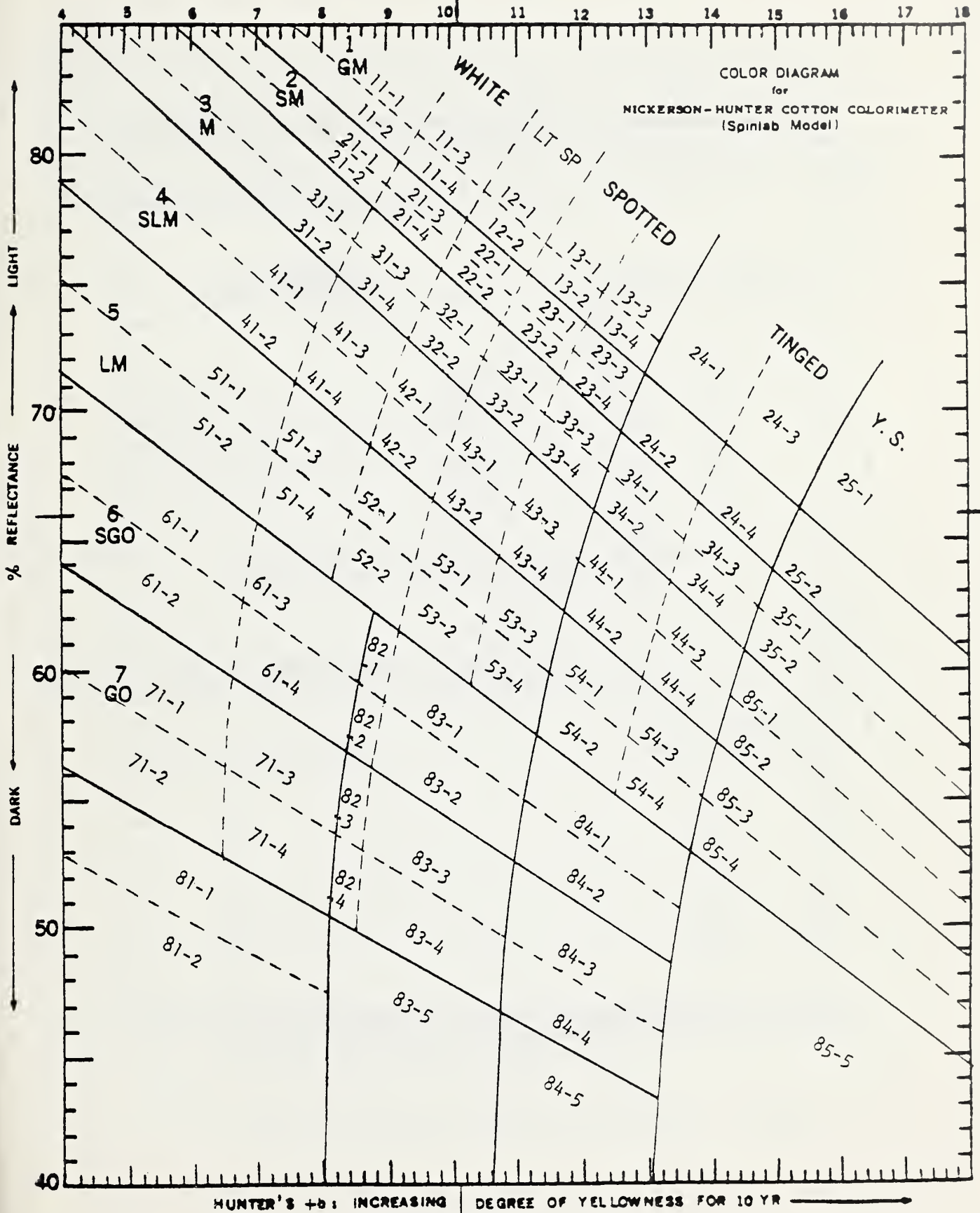
Figure 2
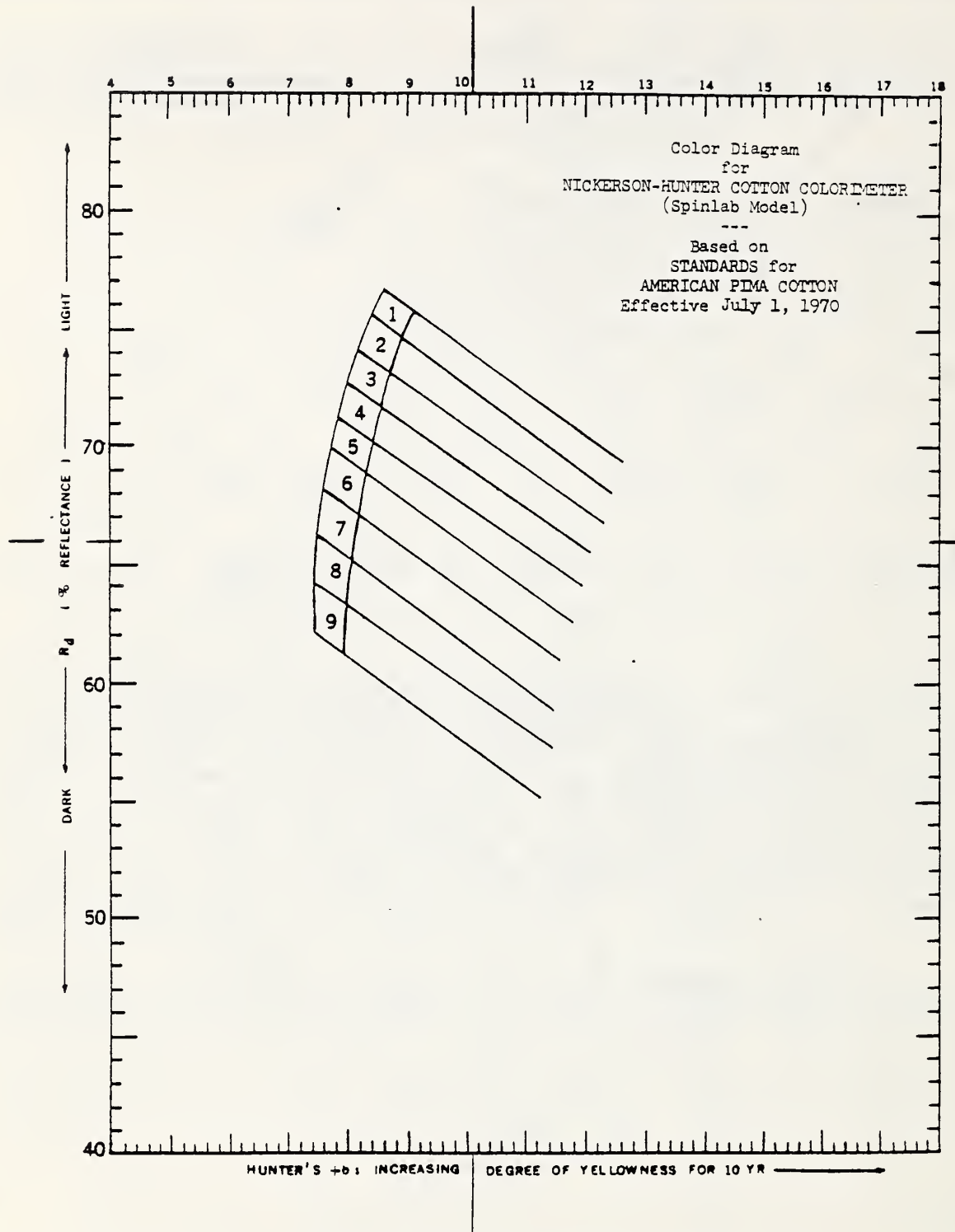
Figure 3. Colorimeter Diagram for American Pima Cotton.

NONLINT CONTENT for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

American Upland Grade	Code	Average Nonlint Content (Percent)
Strict Middling	(21)	1.9
Middling	(31)	2.3
Strict Low Middling	(41)	3.1
Low Middling	(51)	4.4
Strict Good Ordinary	(61)	5.6
Good Ordinary	(71)	7.2

Data Source: 5,953 American Upland Color and Trash Survey samples tested from crops of 1974-78.

The following scale has been developed to represent the average nonlint content for grades of American Pima cotton:

American Pima Grade	Average Nonlint Content (Percent)
2	1.9
3	2.3
4	3.0
5	3.7
6	4.7
7	6.0
8	8.4
9	9.1

Data Source: 2,543 American Pima Color and Trash Survey samples tested from crops of 1974-78.

Differences between results obtained for individual lots and the
average percentages shown for the grades may be due to one or more
of the following reasons:

(1) Grade is a combination of color, leaf and preparation;
any one of which may be the limiting factor.

(2) There is a combination of trash allowable within each
specific grade.

(3) These data are based on weight and do not take into con-
sideration the nature of the trash, which may be as
important as weight in determining the final grade.

SUGAR CONTENT (Potassium Ferricyanide Testing Method) determines
the sugar content as based on a quantitative analysis of reducing
substances (sugars) on cotton fibers. High sugar content in
cotton can be caused by fiber immaturity, insect secretions, or
excessive amounts of natural sugars in mature cotton. Cottons with
sugar contents higher than 0.3 percent may cause textile processing
problems.

Yarn Processing Tests

Small-scale spinning tests were performed to provide indications of
the processing behavior of the various cottons. The percentage of
picker and card waste is related to mill turnout. Low percentages
of waste indicate high mill turnout. Yarn strength, yarn appearance,
yarn neps and chemical finishing test results as measured in these
tests are related to similar quality measurements of the mill prod-
uct. The spinning potential test provides a measure of spinning
end breakage and is directly related to the spinning behavior in
the mill. High spinning potential yarn (SPY) numbers indicate low
end breakage or good spinning in the mill.

MANUFACTURING WASTE reported for a sample of cotton is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed in the previous section on the grade of cotton. The rate at which the cotton is carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American Upland Grade	Code	Average Picker and Card Waste (Percent)
Strict Middling	(21)	5.2
Middling	(31)	5.5
Strict Low Middling	(41)	6.0
Low Middling	(51)	6.9
Strict Good Ordinary	(61)	7.7
Good Ordinary	(71)	8.8

American Pima Grade	Average Picker and Card Waste (Percent)
2	6.4
3	6.7
4	7.4
5	8.0
6	8.9
7	10.1
8	12.3
9	12.9

Data Source: 5,953 samples of American upland cotton and 2,543 samples of American Pima cotton tested for Shirley Analyzer nonlint content from the crops of 1974-78. Picker and card waste was calculated from its relationship to Shirley Analyzer nonlint content.

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

YARN STRENGTH is perhaps the most important and reliable test of
yarn quality. Yarn strength not only determines the range of the
usefulness of a given cotton, but is also an indication of spinning
and weaving performance. The yarn strength test is performed on
120 yard skeins (80 turns on a 1.5 yard reel). Results reported
are based on the average of 25 skeins for each yarn number. Yarn
strength is reported in terms of skein strength, since studies have
shown that such strength values are more closely related to fabric
strength as well as to fiber properties than single strand yarn
strength. Skein strength data for the two numbers spun are re-
ported for each lot. Length, strength and fineness influence yarn
strength more than other fiber properties.

The following descriptive terms may be of help in determining the
relative level of yarn strength in this report:

Kind of Yarn, Staple Length Group and Description	Yarn Skein Strength in Pounds for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	262 - 282	82 - 90
Average	283 - 303	91 - 99
High	304 - 324	100 - 108
Medium Staple Group:	22s	50s
Low	88 - 100	26 - 32
Average	101 - 113	33 - 39
High	114 - 120	40 - 46
Long Staple Group:	22s	50s
Low	89 - 105	26 - 34
Average	106 - 122	35 - 43
High	123 - 139	44 - 52
Combed Yarn:		
Long Staple Group:	22s	50s
Low	110 - 126	35 - 43
Average	127 - 143	44 - 52
High	144 - 160	53 - 61
Extra Long Staple Group:	50s	80s
Low	61 - 63	31 - 33
Average	64 - 66	34 - 36
High	67 - 69	37 - 39

Data Source: 365 short staple; 1,447 medium staple; 144 long
               staple; and 88 extra long staple lots of cotton
               tested from the crops of 1974-78.

YARN ELONGATION results were obtained in connection with yarn
skein strength tests. Elongation in the yarn is highly corre-
lated with fiber elongation. Yarns with high elongation give
less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in deter-
mining the relative levels of yarn elongation:

Kind of Yarn, Staple Length Group and Description	Yarn Elongation in Percent for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	6.3 - 6.9	5.2 - 5.8
Average	7.0 - 7.6	5.9 - 6.5
High	7.7 - 8.3	6.6 - 7.2
Medium Staple Group:	22s	50s
Low	5.0 - 5.6	3.4 - 4.0
Average	5.7 - 6.3	4.1 - 4.7
High	6.4 - 7.0	4.8 - 5.4
Long Staple Group:	22s	50s
Low	4.7 - 5.3	3.4 - 4.0
Average	5.4 - 6.0	4.1 - 4.7
High	6.1 - 6.7	4.8 - 5.4
Combed Yarn:		
Long Staple Group:	22s	50s
Low	5.6 - 6.0	4.2 - 4.6
Average	6.1 - 6.5	4.7 - 5.1
High	6.6 - 7.0	5.2 - 5.6
Extra Long Staple Group:	50s	80s
Low	5.2 - 5.4	4.3 - 4.5
Average	5.5 - 5.7	4.6 - 4.8
High	5.8 - 6.0	4.9 - 5.1

Data Source: 365 short staple; 1,447 medium staple; 144 long
staple; and 88 extra long staple lots of cotton
tested from the crops of 1974-78.

YARN APPEARANCE refers to the relative evenness, smoothness, and freedom from foreign material of the yarn as evaluated by visual comparison of the yarn with the latest standards adopted by the American Society for Testing and Materials (ASTM). Since appearance is very important in many types of cotton products, high yarn appearance grades are desirable. The following descriptive terms may be of help in determining the relative levels of yarn appearance in this report.

Kind of Yarn, Staple Length Group and Description	Yarn Appearance Index for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	109 - 117	91 - 101
Average	118 - 126	102 - 112
High	127 - 135	113 - 123
Medium Staple Group:	22s	50s
Low	76 - 88	58 - 68
Average	89 - 101	69 - 79
High	102 - 114	80 - 90
Long Staple Group:	22s	50s
Low	77 - 91	60 - 70
Average	92 - 106	71 - 81
High	107 - 121	82 - 92
Combed Yarn:		
Long Staple Group:	22s	50s
Low	93 - 105	77 - 87
Average	106 - 118	88 - 98
High	119 - 131	99 - 109
Extra Long Staple Group:	50s	80s
Low	100 - 106	97 - 105
Average	107 - 113	106 - 114
High	114 - 120	115 - 123

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

Yarn Appearance Grades

Grade	Index
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
Below D	60

YARN NEPS are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on a Uster Evenness Tester with Imperfection Indicator, Model B. This is an electronic instrument which detects and counts neps in yarn. The yarn is drawn through a set of condenser plates, approximately 8 mm in length. These plates create an electrical field which counts the neps when the yarn oversteps or understeps present limiting values. Yarn nep tests are made at a constant speed of 50 yards per minute for five minutes, for a total of 250 yards tested per observation. Two observations are considered a complete test. The total of the two observations is multiplied by two to obtain the number of yarn neps per 1,000 yards. Insufficient data has been collected to develop descriptive terms for determining relative levels of yarn neps.

SPINNING POTENTIAL YARN NUMBER indicates the finest yarn number that can be spun from a cotton sample without any end breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a one-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end breakage during the one-hour test run.

The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

Spinning Potential Yarn Number (SPY No.)

Description	Short Staple Group	Medium Staple Group	Long Staple Group
Low	31 - 39	43 - 53	49 - 63
Average	40 - 48	54 - 64	64 - 78
High	49 - 57	65 - 75	79 - 93

Data Source: 365 short staple, 1,447 medium staple; and 144 long staple lots of cotton tested from the crops of 1974-78.

Table 16.--Cotton: Standard machine settings and specifications for processing specified staple length groupings.

PROCESS		STAPLE LENGTH GROUP			
		Short	Medium	Long	Extra Long
1. PICKER					
Standard Atmospheric Conditions:					
Temperature.............................	Degrees F.	75	75	75	75
Relative Humidity.......................	Percent	60	60	60	60
Each test lot is processed through a finisher-type picker twice to produce the specified weight of lab............	Ounces Per Yard	14	14	14	11
Type of Beater..........................		Kirschner	Kirschner	Kirschner	Kirschner
Beater Speed............................	r.p.m.	1,000	1,000	1,000	1,000
Settings:					
Feed Roll to Beater.....................	Inches	3/16	3/16	3/16	3/8
Grids to Beater, Top....................	Inches	5/16	5/16	5/16	9/16
Grids to Beater, Bottom.................	Inches	11/16	11/16	11/16	11/16
2. CARD					
Standard Atmospheric Conditions:					
Temperature.............................	Degrees F.	75	75	75	75
Relative Humidity.......................	Percent	60	60	60	60
Picker Lap Fed..........................	Ounces Per Yard	14	14	14	11
Sliver Delivered........................	Grains Per Yard	50	50	50	40
Production Rate.........................	Pounds Per Hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer Speed............................	r.p.m.	11	8	6	4
Cylinder Speed..........................	r.p.m.	165	165	165	165
Flat Speed..............................	Inches Per Minute	2-7/8	2-7/8	2-7/8	2-7/8
Licker-In Speed.........................	r.p.m.	435	435	435	435
Clothing:					
Cylinder, Hollingsworth Metallic........	Number	35	35	25	25
Doffer, Hollingsworth Metallic..........	Number	29	29	29	29
Flats, Fillet...........................	Number	110	110	130	130
Settings:					
Feed Plate to Licker-In.................	Inches	0.010	0.010	0.010	0.017
Mote Knife to Licker-In, Top............	Inches	.012	.012	.012	.012
Mote Knife to Licker-In, Bottom.........	Inches	.010	.010	.010	.010
Licker-In Screen to Cylinder............	Inches	.034	.034	.034	.034
Licker-In to Cylinder...................	Inches	.007	.007	.007	.007
Flats to Cylinder, Back, Center and Front.	Inches	.010	.010	.010	.010
Back Plate to Cylinder, Top.............	Inches	.022	.022	.022	.022
Back Plate to Cylinder, Bottom..........	Inches	.022	.022	.022	.022
Front Plate to Cylinder, Top............	Inches	.029	.029	.029	.029
Front Plate to Cylinder, Bottom.........	Inches	.012	.012	.012	.012
Doffer to Cylinder......................	Inches	.007	.007	.007	.007
Cylinder Screen, Back...................	Inches	.022	.022	.022	.022
Cylinder Screen, Center.................	Inches	.034	.034	.034	.034
Cylinder Screen, Front..................	Inches	3/16	3/16	3/16	3/16
Doffer Comb to Doffer...................	Inches	.017	.017	.017	.017
Crusher Rolls Pressure..................	Pounds	281	281	281	281

Table 16.--continued.

PROCESS		STAPLE LENGTH GROUP			
		Short	Medium	Long	Extra Long
3.	**SLIVER LAPER (Combed Only)**				
	Standard Atmospheric Conditions:				
	Temperature..........Degrees F.	--	--	75	75
	Relative Humidity....Percent	--	--	60	60
	Sliver Fed, 20 Each....Grains Per Yard	--	--	42	42
	Lap Delivered....Grains Per Yard	--	--	808	808
	Speed....Yards Per Minute	--	--	46	46
4.	**COMBER (Model 52)**				
	Standard Atmospheric Conditions:				
	Temperature..........Degrees F.	--	--	75	75
	Relative Humidity....Percent	--	--	60	60
	Laps Fed, 6 Each....Grains Per Yard	--	--	808	808
	Sliver Delivered....Grains Per Yard	--	--	50	40
	Production Per Hour....Pounds	--	--	22	22
	Setting of Cushion Plate to Detaching Roll....Inches	--	--	.33	.40
	Nominal Waste....Percent	--	--	16 to 17	16 to 17
5.	**DRAWING FRAME (Four Over Five)**				
	Standard Atmospheric Conditions:				
	Temperature..........Degrees F.	75	75	75	75
	Relative Humidity....Percent	60	60	60	60
	First Process:				
	Sliver Fed, 8 Each....Grains Per Yard	50	50	50	40
	Sliver Delivered....Grains Per Yard	55	53	53	42
	Second Process:				
	Sliver Fed, 8 Each....Grains Per Yard	55	53	53	42
	Sliver Delivered....Grains Per Yard	60	55	55	44
	Speed....Yards Per Minute	36	36	36	36
	Roll Settings (Center to Center):				
	First to Third....Inches	2-3/4	2-3/4	2-3/4	2-3/4
	Third to Fourth....Inches Plus Fiber Length	10/16	10/16	10/16	8/16
	Fourth to Fifth....Inches Plus Fiber Length	13/16	13/16	13/16	12/16
6.	**LONG DRAFT ROVING (8 X 4, 1-Apron Type)**				
	Standard Atmospheric Conditions:				
	Temperature..........Degrees F.	75	75	75	75
	Relative Humidity....Percent	60	60	60	60
	Sliver Fed....Grains Per Yard	60	55	55	44
	Roving Delivered....Hank	1.30	1.80	1.80	4.25
	Spindle Speed....r.p.m.	1025	1025	1025	1025
	Roll Settings (Center to Center):				
	First to Second, Standard....Inches	2-1/4	2-1/4	2-1/4	2-1/4
	Second to Third....Inches	1-3/8	1-1/2	1-5/8	1-11/16 to 1-7/8

Table 16.--continued.

PROCESS		STAPLE LENGTH GROUP			
		Short	Medium	Long	Extra Long
7. LONG DRAFT SPINNING (2-Apron Type)					
Standard Atmospheric Conditions:					
Temperature................................	Degrees F.	75	75	75	75
Relative Humidity.........................	Percent	65	65	65	65
Roving Fed Single.........................	Hank	1.30	1.80	1.80	4.25
Twist Multiplier..........................	Number	4.4	4.0	3.8	3.6
Carded Yarns..............................	Number[1]	8s & 22s	22s & 50s	22s & 50s	--
Combed Yarns..............................	Number	--	--	22s & 50s	50s & 80s
Spindle Speed.............................	r.p.m.[2]	9000	9000	9000	9000
Roll Settings (Center to Center):					
First to Second, Standard.............	Inches	2-1/16	2-1/16	2-1/16	2-1/16
Second to Third, Standard.............	Inches	1-3/4	1-3/4	1-3/4	1-3/4
8. OPEN-END SPINNING[3]					
Standard Atmospheric Conditions:					
Temperature...............................	Degrees F.	75	--	--	--
Relative Humidity.........................	Percent	65	--	--	--
Sliver Fed................................	Grains Per Yard	60	--	--	--
Twist Multiplier..........................	Number	4.5	--	--	--
Carded Yarns..............................	Number	8s	--	--	--
Rotor Speed...............................	r.p.m.	45,000	--	--	--
Rotor Diameter............................	mm	46	--	--	--
Opening Roll Speed........................	r.p.m.	7200	--	--	--

[1] Additional yarn is spun on a 96-spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end breakage.

[2] All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed of 5,500 r.p.m.

[3] Barber Coleman Spin-Flex Open-End Frame.